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Dr. W. Murray Weidman.

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THE

MARYLAND

MEDICAL RECORDER,

Devoted to Medical Science in general.

CONDUCTED BY

HORATIO G. JAMESON, M. D.
Professor of Surgery in Washington Medical College, Baltimore.

Quæramus optima, nec protinus se offerentibus gaudeamus; adhibeatur judicium inventis, dispositio probatis. *Quintilian.*

VOL. 3.—NO. 1. JULY, 1832.

Baltimore:
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1832.

ADVERTISEMENT.

THE patrons of this Journal are informed, that the work will hereafter appear in semi-annual numbers. To be published on the first of April and first of November. Two numbers will form a volume, containing not less than 380 pages—the first number of the present year will be published on the first of July.

The editor has been appointed superintendent of the city vaccination—this office will bring into his hands a vast supply of vaccine virus. He is, therefore, prepared and will engage to furnish every subscriber with a portion of virus, with each number—this being on the first of April, and first of November, will be a suitable time for country physicians; and the city physician will have his advantage in being furnished, at least twice a year, with regenerated virus.

Those who wish an earlier supply this season than the first of July, will be supplied immediately upon becoming subscribers. Present subscribers will be supplied upon application, free from expense, first paying arrearages where any are due.

The editor has lately improved the vaccine matter, by passing it through the system of the cow, at the instance of the Mayor and Board of Health; and it is his intention to regenerate it once every year. The improved appearance of the disease at present, affords strong assurances that the frequency of varioloid, will be much lessened by this precautionary measure.

The price of the volume, including the virus, will be three dollars; but five dollars, actually paid in advance, will entitle to two volumes, which may be bound into one—in all cases, the virus will be forwarded with each number, as fresh as possible.

The back volumes will be furnished, bound, at $3 50 each, and the purchaser will be entitled to a portion of virus with each volume.

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The work will be printed on a sheet of 24 pages, so as to lessen the postage. Under the present arrangement, the postage on all communications, and the numbers, must be paid by the subscribers.

The profession are respectfully and earnestly requested to furnish communications for publication in the Journal. All communications to be made to the editor.

The present number has been delayed upwards of a month, for the purpose of collecting domestic intelligence on the subject of cholera. We have to apologise to our patrons for not sending the vaccine virus with the present volume. The excitement existing respecting the cholera, has so far interrupted the operations of the board of health, in regard to vaccination, that recent matter cannot be furnished. It is hoped a similar disappointment will not occur.

Should any subscriber wish a supply of matter, he will be furnished upon writing, and paying postage, if by mail. At this season, it is hoped, there will be no serious disappointment; and no pains will be spared to supply the virus in the fall, when it will be more wanted than at the present season.

THE

MARYLAND

MEDICAL RECORDER.

VOL. 3. JULY, 1832. NO. 1.

ORIGINAL COMMUNICATIONS—AND SELECTIONS.

ART. I. *Observations on the Cholera Morbus, which has been prevailing for some time past in various parts of Europe.*

Our readers will recollect, that we have, in our preceding volumes, afforded information from time to time concerning this widely spread, and alarming disease. The disease continuing to extend its ravages, and having, in its course, advanced nearer and nearer to us, for the last two years, too much pains cannot be bestowed on this truly momentous subject.

We have not met with any thing which has served to lessen our confidence in the opinion most generally entertained by the profession in Europe at this time, and which we have been endeavoring, with some of the more able of the profession in this country to establish. But notwithstanding the settled conviction of ourselves and many others, still there are many of the profession, (but especially a large portion of the *people* in Europe and in this country,) who believe the disease to be contagious. Such being the state of things, it seems meet that we continue to add a few of the more important items of information from abroad, with the view of more generally and firmly establishing the opinion, which we believe to be incontrovertible, (viz:) that the deadly disease, known by the name of Asiatic or Russian Cholera, is not contagious, nor can it be arrested in its epidemical career by quarantine, or sanatory cordons.

Since our last publication on this subject, we have received important information from different quarters. The most satisfactory account received, as regards the cause, and the symptoms of the disease, is contained in a pamphlet forwarded to us some

time since, by our friend and correspondent doctor Frickë, of Hamburg. It is our purpose to furnish our readers with a translation of this pamphlet, so far as we find its contents bearing directly on the subject of Cholera; and to add to such information, as may thence be derived, some other facts and observations, from other highly respectable sources.

We intend, in the first place, giving a brief abstract of the preliminary observations of the author, and then enter upon a regular detail of the disease as seen at Hamburg.

It is said, that at a time when no Cholera was known to exist within 30 miles of Hamburg, it suddenly made its appearance in the beginning of October, 1831. Its approach towards that city was anticipated by the medical public, and precautionary measures were adopted to prevent its occurrence. Indeed, the cool and unprejudiced observer, says our author, had for months perceived a resemblance in the diseases which existed then at Hamburg, and those which had always preceded the Cholera in neighboring towns.

In answer to the question, how did the Cholera originate in Hamburg? it may be answered, says doctor Frickë, that it is only necessary to examine the contents of the pamphlet before us, to be satisfied that the Cholera is not contagious.

There is appended to the pamphlet a ground plan of Hamburg, with the names of all the streets, courts, walks, &c.; by this plan it appears that the disease, which set in about the first of October, existed in nearly a hundred streets within that month. We shall show hereafter that the first cases were remote from the wharves, and that no disease existed at the wharves except the case of one man, about the 10th of October, who had no communication whatever with the land till he was removed to the hospital, already containing several patients affected with Cholera.

We are reminded that the Cholera broke out at Dantzic about the 29th of May, 1831—at Riga about the 25th of the same month—at St. Petersburg about the 29th of June—and Königsberg about the 22d of July. In consequence of the approach of the disease thus clearly manifested, the senate of Hamburg resolved to do every thing in their power to prevent the arrival of the disease in their city. The disease still approached and was soon at Berlin. At this early period measures were adopted to establish a rigid quarantine at Hamburg, against such places as were affected with the disease. About the 12th of September a quarantine was established, which prohibited all ships from entering the port without clean bills of health.

So apprehensive were the city authorities of the entrance of the Cholera, that, as early as the 30th of July, there was a town meeting, among the city officers, at which was organized a gene-

ral health commission, consisting of a certain number of the senators, and physicians, surgeons, and apothecaries.

It may not be unimportant to our readers to furnish them with some intimation of the nature of this commission which seems no less respectable than likely to give full effect to such measures as were thought most likely to prevent, retard, or ameliorate, this frightful disease.

The general health commission was made to consist of four members of the senate, two physicians, one surgeon, one accoucheur, one pharmaceutist, four citizens, (bürgers,) with two citizens from the suburbs—and an assistant body composed of the same number of professional men, and citizens equally respectable as the other board. The whole constituting a body of about 30 of the most intelligent men in Hamburg.

Among their early measures in addition to their establishing a strict quarantine, and other restrictive measures, they provided hospitals in anticipation, in which were provided two hundred beds, and these were supplied with physicians, and all necessary officers, and servants; and it was made the duty of persons having Cholera in their houses to put out a label, upon which was written CHOLERA.

The following brief abstract of the meteriological observations may not be uninteresting.—If we take into the account the months of May, June, July, August, and September, the year 1831, (the year of Cholera) was warmer than the preceding year, *and warmer than usual.* The thermometer rose in '31, to 20° R. on 52 days; in the year '30, but 27 times. The main temperature for 1831, was 13° 38', that for 1830, 12° 09'. The temperature was suddenly reduced in the month of September; the difference between the main heat of September 1830, was 2° 58' —in 1831, 4° 68', mostly 3° 20°. The barometer ranged higher in 1831, than in the preceding year; and the changes were more gradual. The hydrometer ranged higher in 1831, than in 1830. There were more clear days in the year 1831 than in the year before, and leaving September out of the account, more than common. In 1830 there were 101 rainy days; in 1831 there were but 82; in 1830 there was thunder 11 times; in 1831, fifteen times.

The wind was much more frequently from the east in 1831, than in the preceding year—it was seldom west, which is ordinarily the prevailing wind. In the year 1830 the wind was noted to be eastward 42 times—in '31, 62 times—1830, westwardly 100—1831, 79 times—1830, northwardly 45 times—1831, 52—1830, southwardly 55 times—1831, 34 times.

Population of Hamburg.—Hamburg contains 120,000 inhabitants—of which the strangers and military make one thousand.

—There are about 27,000 men, 20,500 women; 17,500 boys, 21,500 girls under 18 years of age—men servants about 4,500, women servants 8,000. Of these there are 2,000 Catholics, 4,500 Presbyterians, 10,000 Jews, 1,000 Menonists, the residue of the inhabitants are Lutherans. There are about 8,500 houses, besides a large number of halls, and small dwelling (booths); and, 18,000 inhabited cellars. Many of the poor in Hamburg live in narrow passes that are damp and filthy, and many of those who inhabit these places never see the sun, except they leave their dwellings. There are many who live in wider streets, but in deep cellars which are damp or wet—these two classes make from 30 to 40,000 persons, besides which there are about 6 or 7 thousand paupers. We are told that these cellars are liable, two or three times a year, to be filled with water, by the rising of the Elbe—the water usually remains 6 or 8 hours, after which the inhabitants clear out the cellars as well as they can, and move into them before dried, and yet it is known, that people have inhabited these cellars for two or three generations, and that many of them have arrived at great ages.

Doctor Frickë has given us an abstract of the deaths for ten years preceding that in which the Cholera made its appearance; by this abstract it appears, that the mortality had been on the increase for some years preceding the existence of Cholera. In the year 1830, there were 5350 deaths, and but 4582 births, making a difference on the side of mortality of 758. It is not a little remarkable that in the month of September, 1830, there were 72 deaths by Consumption, while in 1831, there were but 6 during that month—and in the month of October, 1831, while the Cholera was raging there, but 28 cases of Consumption occurred, while in the same month, of the preceding year, there were 42 deaths from this disease.

The first case of Cholera which was known to occur in Hamburg, was on the 6th of October, 1831, and it appears that on that day, there was but one case: the daily account, up to the 15th of that month, stands thus:

October	6th,	Deaths from Cholera,	1
"	7th,	. . . . .	1
"	8th,	. . . . .	2
"	9th,	. . . . .	3
"	10th,	. . . . .	1
"	11th,	. . . . .	5
"	12th,	. . . . .	5
"	13th,	. . . . .	11
"	14th,	. . . . .	10
"	15th,	. . . . .	13

We are told that a seaman died on board a ship at quarantine, on the second of October. He had been affected with chronic Diarrhea. But died without vomiting or fever—there were no pains in the belly, nor was there headach. The body having been dissected by a council of physicians, and surgeons, they gave as their opinion, that this was not a case of Cholera. The ship having rode out her quarantine, lay harmless at the lower harbor.

First appearance of Cholera at Hamburg.

The public surgeon Hauptfleisch, on the evening of the 6th October, (1831,) reported to the city authorities, the following information:

To-day at noon, I was called to a deep cellar in Nicholai-street, to see a sick man named Peter Peterson, 67 years of age, who was born at Emden, in Eastfriesland. This man had been a pilot, but now lived clandestinely by cards, and begging—and according to the report of the *taverness*, Johanna Ohleus, a woman aged 44, (born in Hamburg,) Peterson had been in her cellar on the evening of the 5th of October, and drank a great quantity of sour milk, and afterwards drank several drams; and he was a free drinker of ardent spirits. On the 5th of October, three quarters of an hour after ten o'clock, this man was taken with violent vomiting and purging, which continued very violent till half past 2 o'clock in the night, after which it was somewhat abated, till *six* in the morning. The patient was now greatly reduced and broken down, but still conscious; I forthwith applied suitable remedies, but without effect. The patient grew constantly weaker, the breathing rattling, the extremities as cold as ice, the hands and feet blue, the eyes sunken in.—These symptoms were accompanied with an intermittent pulse, and cramps in the extremities—he died at 6 o'clock. The body was immediately taken to the dead-room, at the *curhaus*. On the 7th of October, the body was inspected, and the muscles of the extremities were found hard and stiff; there were bluish spots on the hands and feet, which rapidly changed to black.

There being a large number of inmates, as well criminals for slight offences, as also sick persons, it was thought proper to remove the dead body as quickly as possible. Inquiry instituted to ascertain the habits of Peterson, went to prove, that, as before stated, he had been living about four months in a deep cellar, that he lived by cards and begging, and drunk many drams of whiskey daily. He had lived in this dissolute manner 31 years, in Hamburg. For the last 20 weeks he had not been out of Hamburg. (On the 5th of October, he had been seen at two places, but had no intercourse with strange seamen, or other strangers.) He was a great drunkard, and averse to the society

of women. He had not visited any water craft, except at the woodbridge, and brookbridge, where he witnessed the landing of Fish, Potatoes, &c.

Peterson died in the front of the cellar, near a window, in company with five or six persons, long residents of this abode.

This deep cellar and dwelling, was situated No. 30 Nicholai-street, about 800 feet from the wharf; on the evening-side; the street running from east to west, not narrow but wide and high. In this street are but few dirty yards, and there is a good descent for water. Doctor Hauptfleisch goes on to describe minutely the interior of the lower part of this house, which had been a public building, a dancing room, tavern, nine-pin-alley, &c. It only seems necessary to notice the fact of there being a great number of beds crowded together, in the apartments of the extensive cellar of which we have been speaking. There lived at the time under notice, in this cellar, forty-one persons; these had different trades and occupations. On the 11th of October these persons with others, to the number of 85, were removed to a better location at the expense of the city and kept under guard.

Second Report.

On the 7th of October the city-physician reported in the evening, that while in the act of attending to the purification of the air in the before named cellar, he observed a woman in bed, (named Maria Dorothea Beckman) aged 28 years, who had been born in Hamburg, now affected with purging and vomiting.—The symptoms had made their appearance about half an hour before, accompanied with giddiness; the pulse very small, the face pale, and the extremities pretty cold. The doctor ordered the remedies which he judged proper, internally, and spirituous rubbings. "At half past eleven o'clock, I accompanied doctor Schleiden to this patient, and found the extremities now as cold as ice, the eyes sunken, and the pulse scarcely to be felt, severe cramps." Dr. Schleiden prescribed for the patient, and asked doctor Ebeling to visit the case with him. At 6 o'clock there was some slight appearance of amendment, at least the pulse was more perceptible, but at 10 o'clock she was worse, the symptoms are renewed, "the hands and feet are becoming blue; the eyes are sinking in deeply; half past twelve at night, patient now in convulsions, which lasted in the toes more than an hour, after which fled the last spark of life."

The woman Beckman lay in one of the first beds in the entrance of the cellar. Two days before her death, she was engaged in digging potatoes, about three-fourths of a mile from Hamburg. She had been a prostitute during 10 years, but the last 15 years she lived in the cellar, and maintained herself by working

out in part; and partly by illicit intercourse—with some of her admirers in the cellar. With Peterson, (the subject of the first case,) she had no intercourse—except that she paid some attentions to him while sick—She lived a lawless life, and was extremely intemperate. She had not been out of her cellar for 12 weeks preceding her attack, except to dig potatoes as already stated, which was on the 5th of October.

Third Report.

While doctor Schleiden was attending the above named persons, the case of a notorious drunkard was mentioned, a man named Wm. Summers, aged 37 years, a native of London, formerly a ferryman, who complained of pains in the breast, giddiness, pressure at the stomach, attended with convulsions. The doctor directed an emetic to be taken immediately, after which both physicians (Schleiden and Hauptfleisch, we presume,) prescribed such remedies as seemed to be indicated, among which were venesection, blisters, leeches, rubbings, &c. During this day the symptoms seemed to abate and the prospect seemed to improve. On the next morning, at 7 o'clock, the symptoms were worse in consequence of his having drank a considerable quantity of ardent spirits—the face now Hippocratic. The pulse scarcely perceptible, the voice weak and hoarse. In the evening he was taken to the hospital Hornwerk, where he died the next day. This debased daily drunkard, was the companion of Peterson. He had been begging, but did not associate with any one in particular, except that fellow. How long he had been in Hamburg was not known, but it was ascertained that he had not been out of the cellar for four weeks, and came last from the General Hospital, from whence he was forcibly driven, on account of his drunkenness. The night that Peterson sickened, this man slept with him, and afterwards paid him some attentions.

Some time after the above reports were made, doctor Buchheister, physician to the Hornwerk hospital, represented as follows: "I found on the 9th of October, at the time I took charge of the Cholera patients at Hornwerk hospital, a man who had sickened on the 7th, in Nicholai-street, in a deep cellar. This patient had been much benefited by bloodletting, frictions, opium, and camphor, &c.; but was now growing worse. The entire skin was cold, the eyes sunken, the aspect of the face greatly anxious, the tongue slightly covered, great thirst for cold drinks—the pulse scarcely perceptible, vomiting and purging of thin whitish matter—anxiety great, cramps in the legs. The doctor ordered brisk brushings with brushes wet with rum—allowed him to drink cold water, with a little wine, to be taken in small portions; and prescribed, ℞. Infus. menth. pip. ex. ℥j. parat. ℥viij. ad Lig.

Laud. Syden. qt. LX, lig. Hoffm. ℥ij. m.—a table spoonful every hour. Having a blister on the belly, he dressed it with unguent. sabin. He slept an hour and had two stools, and vomited twice during the night. The anxiety has much abated, the skin is something warmer, the tongue coated brown, the voice weaker and hoarser—thirst still great. Proceed with the medicine, and give for drink thin mucilage of Salep, with a little red wine.

On the 10th of October this patient vomited once more, when the scene became changed—He was restless, talked now English now German; he seemed to lose his physical powers, and talked incoherently; and strove to get out of bed. The tongue moist, the former great thirst now subsiding, the body warm, no vomiting nor purging, but in their stead slight cramps and convulsions. The pulse small and quick. The eyes glistening, and an appearance of *typhus versatilis*. Mustard plasters were applied to the calves, and there was ordered the following:

℞. Camph. gr. XXXj.
Gum Arabic q. s.
Aq. Menth. pip. ℥vj.

Mix—every hour a table spoonful.

He died at midnight, on the 10th of October, 1831.

Dissection.—The eyes deeply sunk in their sockets, and turned upwards; the face had an appearance of despair, and was generally much contracted; the extremities greatly drawn; two inches above the hands was red blue; on the belly and calves marks of the sinapisms. On cutting open the belly, there was a considerable venous discharge. The stomach distended, and one of its coats slightly reddish, covered with whitish slime; the liver outwardly white, upon cutting into it discovered much venous blood—the gall bladder distended, with yellow greenish gall, the outer coat of the intestines slightly red, the inner covered with a whitish brown matter, much of which lay in the colon, and did not soon change color on exposure to the air.—The bladder was firmly drawn together, and empty; in the aorta, and vena cava venous blood. The brachial arteries empty, the radial filled with coagulated tar-like blood.

Fourth Report.

On the 8th of October, half past nine, Mr. Stubbe informed the city police that a laborer, in his employment, who lived 3500 feet from the wharf, Langangang, No. 60, had died suddenly that morning. This man (Adam Heuer), stated that he had previously to his coming to the place where he died, hired with the shipwright Boas Myer. On the 7th of October, 8 o'clock in the evening, he came home, and eat soup and meat; after which he went out and returned about 10 o'clock at night. In the night, at 2 o'clock, he complained of stricture at the breast, and had

great thirst. He first drank a great quantity of cold water, afterwards some warm beer. Soon after this, severe vomiting and purging came on, to which was soon added strong cramps, which were present the same morning when he was seen, at 8 o'clock.

Doctor Hamptfleisch found the body on the floor yet warm, the eyes deeply fallen in, the lids livid, the upper and lower extremities also livid, the fingers drawn in, with convulsive strength; the joints generally stiff. The muscles of the thigh, (particularly the *vasti*, and the *rectus femoris*,) moved themselves a short time after death with spastic movements. These circumstances were reported by doctor Schleiden, who immediately inspected the body. This man had drank pretty freely, but was not reputed a drunkard.

The foregoing information induced doctor Dammart, a senator, to call together the city authorities, and other physicians, to witness the dissection of the bodies, of Beckman and Heuer.

Report of the Dissection.

Saturday, 8th October, 1831, half past 3 o'clock, a meeting took place, of several surgeons and physicians, for the purpose of dissecting the body of Maria D. Beckman, who died the preceding night. This woman had been a prostitute, and lived in a deep cellar. The dissection was conducted by doctor Hauptfleisch.

Outward inspection—The body strong and well formed, stature of the middling size, some discharges from the mouth, the legs livid, and the extremities stiff, the upper, particularly the fingers, bent into the hands; nails blue, gangrenous spots on the arms—these spots were on the back and other parts; has been bled in the left arm. There was a plaster on the left elbow, and a slight wound on the same forearm.—There were small spots of echymosis; when these were cut into, blood escaped.

The eyes half open, the pupils moderately large, the cornea collapsed, the eyes deeply sunken in, the nostrils widely open, with appearance of a watery moisture; the right ear, and the same side of the neck, covered with gangrenous spots—when the face was washed off, it was marbled with lividness. The navel had a greenish putrid appearance, the belly moderately distended.

Opening of the head.—The dura mater appeared bluish, (livid,) and much marked with blood; the falciform process was attached to both lobes of the brain. The upper membrane of the head slightly red—the pia mater had a whitish matter weeping from about the crown of the head; the veins were much filled; the brain itself was full of blood when cut horizontally; the more internal part of the substance of the brain less turgid with blood. In the ventricles of the brain, there was a little yellowish watery

moisture, perhaps half a tea spoonful. The plexus choroides was filled with dark blood. The lower surface of the brain, and for some distance into the substance, a little red; after which the brain appeared normal; and, this remark applies to the cerebellum, the substance of which appeared only a little softened—on the bottom of the skull was seen some bloody water, that seemed to come from the spinal canal.

Opening of the thorax.—The lungs, when simply looked on, or when cut, appeared healthy and bloodless, and without adhesions—in the pericardium was found about half large table spoonful of watery fluid—the auricles of the heart bluish, and distended—in the left ventricle a little dark blood—the right ventricle crowded with very dark blood. The aorta much distended with very dark blood, the supplying veins empty, no polypous concretions.

Opening of the abdomen.—The omentum was moderately fat, slightly reddish, as also the outer coat of the intestines. The larger intestines of a whitish color. The gall bladder well filled with healthy bile, the inner coat of the small intestines was covered with a reddish slime. The bladder empty, and contracted closely—the spleen normal; the liver was somewhat softer than common, and paler; the stomach outwardly whitish, inwardly its entire coat was covered with blackish thin fluid, which seem to commence distinctly from the duodenum, where there was an echymosis; the small glandular bodies of the abdomen normal; the cœcum was filled with a whitish mass of an opaline appearance, which, upon opening the part, assumed a reddish chocolate color—the mass was at first clear, but changed upon exposure to the atmosphere, in quantity about ℥viij, or perhaps equal to one pound. The small intestines having been cut open there was seen a reddish pretty clear fluid, not unlike rice water, in appearance; the inner coat of the intestines was generally somewhat red, the kidneys somewhat exsanguineous, otherwise normal—uterus and ovaria healthy.

Doctor Schleiden reported that he received the following account of this person's case from doctor Hauptfleisch; on the 7th October, finding her sick, gave her a small dose of opium, which checked the vomiting and purging. Soon afterward there appeared over the whole body a livid color, with pale face, the temperature of the whole body cold as ice; the pulse small and hardly to be felt. It was perceived that her speech was difficult, and attended with hoarseness; and there was interrupted articulation, attended with much anxiety; severe pain, and drawing spasms in the muscles of the calves; she tossed, and was very restless in bed; and showed a strong preference for lying on the

left side. The abdomen was not morbidly sensible to pressure, the tongue was cool, coated white, and paler than natural.

Treatment—℞. mucil G. arabic ℥vj, tinc. opii. Syden. gt. xxx. Table spoonful every hour—oat-meal gruel for drink. Sinapism to the epigastrium, and the other parts of the abdomen were covered with a poultice of oat meal and chamomile. Sametime the intestines were effectually rubbed with spirit of sal ammoniac: an hour afterwards she was bled, about three fourths of a pound was with difficulty obtained, which coagulated; no benefit resulted from this operation. At 3½ o'clock, the circumstances remain the same—at 8 in the evening, directed a powder every two hours, containing two grains of camphor, and ¼ gr. of opium. At 11 o'clock, and an hour after passing water, except something of the cramp, she was tranquil. Soon after this the spasms became violent in the muscles and toes, particularly the great toes—half an hour afterwards she died.

Question.—Is this case, so far as may be inferred from what has been presented, Asiatic cholera?

Answer.—In the affirmative, by doctors Schleiden, Ebeling, Frickë, Kunhardt, Gerson, Chaufepë, sen'r, Zwanck, Sandtman, (and particularly on account of the white fluid seen in the intestines,) Homann, Zimmerman, Nagel, Günther, Oppenheim, Bucheister, Baetckë, Trier, Kulensmidt, Bernhardt, Hauptfleisch, Diedrichs. [We have the pleasure of knowing personally most of the gentlemen whose names appear in the above list, we know most of them to be men of the first eminence in their profession—it may be observed that there are twenty named, what a noble instance of self devotion for the benefit of mankind; for, we have no doubt, at least a part of them, perhaps most of them, believed the disease to be contagious. By their noble, and we may say, of most of them, disinterested exposure to the effluvium from this body, they have presented one of the strongest proofs of the non-contagious nature of cholera. It will ever be to us a source of sweet satisfaction, that among these gentlemen and many others, we were honored for having boldly advocated, in Sept. 1830, the non-contagious nature of yellow fever; and we have the satisfaction to cherish the hope, that we have been instrumental in awakening attention to this momentous subject, and that the day is approaching when Governments will discard the false views of hired favorites, and award merit to those who are entitled to it.]

Dissection of the body of A. Heuer, whose disease and death have already been noticed.

Outward inspection of the body.—Robust form, above middle stature and muscular, extremities stiff, but not livid; the skin on some of the fingers was drawn in, the abdomen neither distend-

ed nor drawn in; the scrotum and penis livid, a few gangrenous spots on the back.

Opening of the head—The dura mater and brain turgid with blood, and some adhesion of the membrane to the brain, the substance internally not injected with blood; in the ventricles a little water, the plexus choroides not injected, nor was there blood at the base of the brain; the sinuses of the brain filled with thin gumous blood, the cerebellum sound.

Opening of the thorax.—Adhesions of the right lung, both lobes much injected with blood, in the pericardium was seen a little watery fluid, the left ventricle of the heart slightly filled with dark blood, the right quite full. The aorta slightly filled with blood, the great veins empty.

Opening of the abdomen.—The omentum pretty sound, not reddish, the blind gut distended; upon cutting into it, it was found filled with fluid resembling rice water; it was neither whitened nor reddened, but marked with spots. The inner coat of the intestines a little reddened, and here and there filled with a portion of reddish fluid. The stomach was much distended, and contained a portion of a fluid resembling beer; liver sound, the gall bladder filled with very dark black fluid, spleen and pancreas healthy—some mucus in the duodenum—the kidneys not much infected, but not pale—the bladder empty, and very closely contracted.

Question.—Was this also a case of Cholera?

In answer to this question, doctor Schleiden stated, that on the 6th of October, he saw a man in a deep cellar, who died under circumstances similar to those noticed—his name was William Summers, (we have already noticed this case,) this man had been treated by bleeding, leeches, an emetic, &c. Another case occurred on the 8th of October, in a woman, named Denker, who died of Cholera.

After full investigation of these cases, with their dissection, doctor Schleiden stated as his opinion, that these were cases of cholera—signed by doctors Schrödter, Schleiden, Frickë, Kurnhardt, Chaufepë, sen'r, Zwanck, Homann, sen'r, Zimmerman, Gerson, with the remark, that further attention should be paid to cases—Sandtman, with full agreement to the affirmative of the question; H. Nagel, the same; Kulensmidt, the same; G. B. Günther, J. E. Bucheister, F. W. Oppenheim, cannot, with the dissection witnessed, and the small amount of observation on the disease, fully agree that the disease in question is the Asiatic cholera—Trier in the affirmative to the question; J. P. Hauptfleisch, the same—Bernhardt and Diedrichs, the same.

Upon the delivery of this record and account of the dissections, to his excellency Burgermeister, doctor Bartels, president of the general health commission, notice was given to his magnificence, the president of the Senate, doctor Abenroth, through whom the Senate was convened the same night. The health commission assembled with the senate, and sat till after midnight, when they made known that, whereas, it appears by three authenticated cases, and two dissections of the dead, and most of the physicians and experienced persons, who had knowledge of the facts, being of the opinion that these were cases of the cholera, it becomes the duty of an elevated senate to make public such facts, and to forbid the issuing of clean bills of health; to make known the same, and as suspicious cases may arise, make them also known; so that all circumstances, subservient to the end in view, be made known. Dated at the meeting of the Senate, in Hamburg, the 9th of October, 1831.

Sunday, 9th October, 2 o'clock, afternoon, there were given, in, at a meeting at the newly built cholera hospital, *Ericus*, the following physicians' reports,—whereas, since the 8th of October, 1831, evening, more cases appeared, with undoubted symptoms of Asiatic cholera, and one other patient has died, and another cannot long survive, without speedy relief, we, therefore, certify that the Asiatic Cholera does exist, so that the proper remedies be applied where necessary. Doctor Schrödter, secretary for the general commission of health—doctors Chaufepë, sen'r, Ebeling, Homann, Kunhardt, Zwanck, Schleiden, Siemers, Gerson, Frickë, Reitz, Siemsen, Fallati, Chaufepë, jun'r.

[After which the Senate met on the same day, and directed the commission of health to do every thing necessary, in furtherance of the necessary measures, in fitting up hospitals, &c.]

Fifth Report.

Doctor Stammann informed the city police, that he was called to a woman, a widow named Dorethea Christiana Denker, aged 42, who was overtaken with purging and vomiting—visiting this patient at 6 o'clock, on the 8th of October, he found the purging and vomiting no better. The matter discharged was thin and had a sourish smell; the face, hands and feet livid; the eyes much sunken; the tongue blueish, but not cold. The patient complained of pain in the eyes, in the scrobiculus cordis, and legs; there was hoarseness, and great anxiety. The patient threw the cover off her arms, and tossed here and there; the pulse not to be felt. Of the secretion of urine no notice was taken. The remedies which were applied, both internally and externally, were ineffectual. At 3 o'clock in the afternoon, the patient died. Cramp of the stomach, and diarrhea, were the most dis-

tressing symptoms. Dr. Stamman had no doubt of this being a case of asiatic cholera; (this case was also reported by doctor Hauptfleisch.

Sixth Report.

It was reported that John Classen, a paver, 45 years old, (Dover fleet, about 2500 feet from the wharf,) had died suddenly on the night of the 8th October. The body was sent to the hospital *Ericus;* and doctor Siemsen, hospital physician, gave the following account of the dissection:—

Outward appearance of the body.—The face somewhat livid, the eyes much sunken, the nose pointed, the extremities livid, the hands spasmodically drawn in, the hands and feet wrinkled; probable age, between 40 and 50. The cranium was not opened for want of time, and the dissection had to be made by candle light.

Opening of the thorax.—The lungs presented adhesions, their substance normal, and not much injected with blood; the outer covering of the heart livid, the veins, particularly the great veins, were turgid with blood; in both ventricles black fluid blood.

Opening of the abdomen.—The substance of the liver very firm; upon cutting into its covering, much clammy black blood escaped upon pressure; the spleen very soft. The color of the outside of the stomach somewhat reddish, the inner side covered with a greenish mucus; the vessels of the intestines, particularly those of the duodenum, remarkably conspicuous. In the guts, was found a yellowish grey substance in quantity, the contents of the gall bladder blackish green, and thin; in the stomach was seen about ℥viij dark greenish fluid, mixed with shreds of lymph, (coagulis.) The kidneys and ureters healthy, except that the former were somewhat turgid with blood. The bladder was closely contracted and small, and corrugated; some whey-like urine. [Doctor Siemsen reports the same case, but we deem the repetition of cases unneccessary.

Seventh Report.

On the 8th of October, at night, a woman named Johanne S. E. Plagemann, aged 46, a beggar, sickened in a deep cellar, and was taken to the Hornwerk hospital, on the 9th, and died at 10 o'clock at night. She had lived 18 months in the cellar, and rambled about the city daily, and was much given to intoxication. On the 6th October, early in the morning, she called at a cellar, No. 20 Nicholai street, and took a dram. She had had no intercourse with men since the death of her paramour who died in August.

The following is the report of doctor Buchheister, physician to the Hornwerk. On the 9th October, there came into the female department a woman, middle aged, named Plagemann—

she had been seized with the disease the day preceding her admission—purging and vomiting were already violent, the spasms particularly severe, the skin as cold as ice, and the anxiety great, so that she tossed about in the bed, and threw of all covering; the pulse was very small, at times imperceptible; great thirst, particularly for warm drink; in other respects she was quiet. Frictions were directed, which had to be left off as the spasms seemed to increase. A large orifice in the arm afforded only a few drops of tar-like blood; after which she was immediately put into a warm bath, upon which the blood began to flow till she lost about 10 ounces; while in the bath the frictions were renewed. She remained 10 minutes in the bath, and being wiped dry, she was put to bed, soon after which the cramps became extremely violent. She felt in no respect improved.—℞ calom. gr. j. sacch, lact. ℈ss. divide in chart. iv—give a powder every hour.—℞ opium puri, gr. j. sacch. alb. ℈ss. ft. pulv. no. iv.—one to be given every two hours. Sinapism to the epigastrium. She remained restless during the night; she slept half an hour but was no better. About midnight she was suddenly overspread with a warm perspiration, but it did not last long. In the morning of the 19th October, the body was as cold as ice, the anxiety increased, and she was again overtaken with vomiting and purging. ℞ camph. gr. ij. sacch. gr. x. Pulv. no. viij.—one every hour. At 8½ o'clock, she died, after having had severe spasms.

Eighth Report.

Claus Joachim Siemann, beggar, living in a deep cellar, born in Hamburg, aged 43, became sick, on the 8th October. He travelled about the town, and, so to speak, lived upon whiskey. In the latter part of his life he had no intercourse with strangers; had frequented Heyhorn's tavern, Grassenneumarkt, No. 116. He took three drams every morning, and again at noon. He had no intercourse with women. He was taken to the Hornwerk hospital on the 10th, at 10 o'clock.

Dr. Buchheister reported as follow of this case:—C. J. Siemann, aged 43, native of Hamburg, laborer, lodged in a deep cellar, was seized on the 8th of October, at 10 o'clock, and was taken to the hospital, on the 10th of October. He had had a number of evacuations, upwards and downwards, attended with spasms. Has not yet taken medicine; at 5 o'clock this morning he had the last attack of vomiting and purging—anxiety not great. The heat of the skin not quite extinguished—an eruption appeared over the whole body, much resembling petechia. He was immediately put into a warm bath, where he was well rubbed, and remained 10 minutes; after this he felt better. ℞. Infus. herb, menth. pip. ℥viij. ex. ℥j. herb. parat. add. laud. liq.

Sydn. gt. xx—a table spoonful every hour. Directed his drink to be salep gruel.

On the 10th, noon, the skin warm and perspiring, the head in particular red and hot; the eyes much reddened; restless with delirium; pulse full, but not particularly hard—bled to 10 ounces; the blood clear, and flowed in a stream. An hour afterwards there were strong symptoms of oppression of the brain—12 leeches to the temples; sinapisms on the calves—every hour, two grains of calomel; cold applications to the head.

October 11th, he took 15 grains of calomel, rested well—the face red and covered with sweat; the tongue somewhat coated, moist and warm; the eyes less glassy; the heat of skin natural; more rational; the pulse small; no purging nor vomiting; no spasms; urine red and clear; passed about six ounces. No pain in the abdomen—continued the cold applications to the head. ℞ calomel gr. j. sacch. lact. ℈ss. Pulv. no. iv.—one every hour. In the evening there were appearances of congestion of the head, slight wanderings, so that he loses himself when speaking. Twelve o'clock at night, the circumstances the same; pain is felt on pressing upon the liver—directed 12 leeches to the part.

October the 12th, in the morning has slept some, skin natural in its temperature, pulse small; more rational. Three passages of a brownish matter; the region of the liver painful; tongue red, hard and dry—continue cold applications. ℞ camphor. trit. gr. j. sacch. lactis ℈ss.—divide in four doses, and give one every hour. Sago with wine allowed. In the evening temperature good, pulse small, the tongue becoming whitish, mind disturbed, slightly conscious when spoken to—Sinapisms to the calves.

October the 13th, in the morning, he was restless last night; he talked incessantly and struggled to get out of bed; pulse small, temperature good, had several passages which were brownish and thin; tongue coated yellow; ℞. opii. puri. gr. j. sacch. alb. ℈ss.—four doses, one to be given every two hours—continue the cold applications. In the evening the symptoms much worse, the delirium much greater, with less power; the pupils contracted like the point of a needle, temperature reduced, 12 leeches on the head, ice to the head, sinapisms to the calves—an hour afterwards 6 grs. of musk with two grains of opium. After lying a little time quiet, he died in dreadful convulsions, at 12 o'clock at night.

Ninth Report.

A seaman sickened on board the ship Atlas, Capt. Flack, on the 8th of October, at the lower harbor. This man and all the crew, as represented by the Captain, had come from Bahia without making land. He was sent to the Hornwerk hospital. The

Twelve leeches to the head; cold applications with ice to the head, sinapism to the precordia.

October 14th, morning—He slept well for six hours; pulse slow; face not red; the temperature pretty good.—Died soon after midnight.

We deem the foregoing cases sufficiently expressive of the symptomatology and of the treatment, but it may not be uninteresting to give the particulars of a few more directions, and some of the more remarkable symptoms.

Case of Frederick Wagner, 24 years of age, a laborer; his habits not noted. There was strong outward expression of the *habitus cholericus*.

Opening of the head—the vessels of the dura mater much filled with venous blood, bloody points through the brain, and its substance somewhat watery. Plexus choroides not remarkably reddened. The cerebellum surcharged with blood, and red; *arbor vitæ* turgid with blood. Much bloody serum flowed from the spinal canal upon the removal of the brain.

Opening of the breast—the right lung not adherent, but in this lobe was seen a tubercle, and the cicatrice of a vomica; the left was healthy; the vetricles of the heart, particularly the right, turgid with dark blood. In the aorto were polypous masses.

Opening of the Abdomen—on the serous covering of the liver was seen a stony concrete, about an inch in extent, attached to the liver, which was otherwise sound. The spleen normal, also the pancreas, as well as the kidneys. The gall bladder not particularly charged with dark bile; the bladder as in the case of Klassen, (the dissection of whose case is not published) the peritonial covering of the stomach of a rose red; the mucous coat covered with a greenish fluid, mixed with a little castor oil—the intestines on their inner surface reddish, and some reddish fluid in their canal.

The following case is so strongly marked by symptoms of malignancy that, we deem it worthy of record. This was a woman named Anna Garren, aged 35 years, and an inhabitant of a deep cellar. She sickened on the 10th October, in the afternoon, and was taken to the hospital. The day before her attack, she was quite well, and slept well the night before—was attacked with violent purging and vomiting, and violent pain in the belly. When she arrived at the hospital the whole body and the tongue, were cold as ice; the face looked as if frozen, the hands appeared blue with cold; the eyes deeply sunken in, the tongue coated white, but moist, the pulse imperceptible—there soon followed severe vomiting and purging, of a thin colorless fluid—great anxiety, and violent cramps, particularly in the feet—the precordia in great distress, particularly towards the back.

This patient was treated pretty much as were those already related, but she died—we have the following account of the dissection:

Outward appearances—The face much fallen in, the eyes drawn upwards, the abdomen much swelled, the extremities much drawn in, the fingers drawn in, the hands, particularly the right about the wrist, of a livid color.

Opening of the head—Upon cutting into the coverings, there appear much venous blood—the dura mater injected with blood of a very dark color—much blood flowed upon cutting into the substance of the brain; the latteral ventricles filled with clear serum, so also was found a portion of fluid in the 3d and 4th ventricles.

Opening of the thorax—excepting some adhesions, the lungs were sound, the heart large and very soft.

Opening of the abdomen—the surface of the liver pale, inwardly not particularly charged with carbon, the gall bladder filled with yellow greenish bile; the stomach somewhat marked with redness in spots; the intestines affected with one ulceration; the *cæcum* quite full of a whitish matter; the aorta and vena cava filled with carbonized blood; the bladder contracted.

A man named Wittschief, 53 years of age, died after a few hours illness.

Outward appearances. The eyes were much retracted, the skin on the hands and feet much wrinkled, the former drawn in by cramps and locked, the latter also contracted. This was a rickety subject.

Opening of the head—the dura mater was closely adherent to the skull, the substance of the brain softened, but not injested. In the left ventricle was some watery fluid, the plexus choroides was turgid with blood—cerebellum soft and injected. Some bloody serum flowed from the spinal canal.

Opening of the chest—the right lung adherent but sound, and not injected, the left perfect—the left ventricle of the heart was filled with thin black blood; in the right ventricle was found a polypus—the aorta contained a dark blackish thin blood—the trachea and cartilages of the true ribs were somewhat ossified.

Opening of the abdomen—the liver was outwardly red, its parenchyma filled with dark blood—pancreas sound, the kidneys injected, the bladder was closely contracted, and filled with muddy urine, the mucous coat secreting the foreign matter—the solar plexus perfectly healthy—the serous coat of the stomach was reddened, the mucous coat healthy, and covered with its usual mucus, so also was the inner coat of the intestines; the gall bladder filled with dark bile, the spleen somewhat attached, and injected with dark blood.

consul for Sweden and Norway, Hijorth, esq. collected the following facts from the ship's papers. Andrew P.Engelund, aged 22 years, was born in Sweden, and belonged to the crew of the ship Atlas, of Stockholm; sailed with Capt. Flack, and a crew of 10 men. The ship left Bahia the 16th of July, 1831, made no harbor till the 14th Sept. where she now lies. P. Engelund suffered from the 1st to the 10th of October, slight diarrhea; which was increased by his want of care. While engaged in the business of the ship, he drank a quantity of fresh beer. On the 8th of October, at night, the spasms were so violent that his comrades remained with him. On the 10th, he was taken to the cholera hospital. None of the ship's crew, excepting the captain, had any communication, either direct or indirect, nor were any of the crew suffered to land till the 11th of October.

On the 20th of October, Ollef Sermonius was taken from the same ship, sick of cholera, to the hospital for such patients On 22d and 23d, two other sailors on board were affected with the cholera, but were cured on board the ship. This day, on the 31st of October, the whole crew are in health.

Doctor Buchheister reports as follows, at the Hernweck hospital, which we quote, although a repetition pretty much of the case of Engelund. Our object in doing this is to call the attention of our readers to the singular inefficient practice, to give it no harsher name. We cannot but express our extreme surprise at the milk and water practice adopted in all the cases detailed, the more so as we knew most of the medical gentlemen, personally, to be men of extensive learning in their profession, and alive to every feeling of humanity, for the meanest of their fellow creatures.

Engelund, 22 years of age, seaman, was brought to the Hernwerk hospital on the 10th of October. He had been affected eight days with diarrhea, to which were added, the day before his admission, vomiting and spasms. The matter evacuated resembled rice water. He has, particularly, cramps in the feet—complains of great thirst and anxiety, the pulse small, and the temperature of the skin moderate. He was immediately put into a warm bath, and was well rubbed while in it. After the bath he felt very ill, complained of severe spasms and vomited. R. Infus. herb. menth. pip. ʒviij. laud. lig. Sydn. gt. lx. liquor Hoffman. ʒij.—a table spoonful to be taken every hour. Twelve leeches to the scrobiculus cordis. At 12 o'clock the spasms had somewhat abated; there was a gentle, warm perspiration, spread over the whole body. The pulse a little raised; and the tongue slightly coated, skin moist and warm. In the evening the temperature of the skin somewhat diminished, the vomiting and diarrhea frequent; rubbings, and warming by means of jugs.

October the 11th, in the morning, he has vomited and purged several times. The fluid thrown up from the stomach resembled camomile tea, that passed downwards resembled rice water—the extremities were cold and without perspiration, the spasms but seldom; the anxiety not great, the pulse scarcely perceptible—frictions, of equal parts of ol. terebinth., and caustic liquid ammonia—sinapisms to the calves. ℞. Rad. columb. ʒij. c. c. aq. fort. ℥i. ad reman. ℥ij. sub. fin. coct. infus. flors. arnic. ʒiij. colat. add. ol. menth. pip. gt. x. One table spoon to be taken every hour. Two hours after beginning with this decoction he vomited again; the skin was warmer, the pulse small but equable; an irregular sweat, tongue a little coated. He showed an aversion to every thing sweet, and had much desire for tea. He drank some warm herb tea with great greediness. In the evening he has vomited every time he took the medicine. He makes no complaint, but lies with half closed eyes, and open mouth—answers sensibly, and has still great desire for warm drink. The heat of skin moderate, and the pulse weak. Directed a teaspoonful of magn. carb. to be taken before every dose of the medicine. At midnight he had several involuntary passages from his bowels—an injection of infusion of mint, and 30 drops of laudanum.

12th October, in the morning—he has slept a little in the night, and laid still—vomited and purged several times. The distress in the precordia not great; the spasms not strong, the pulse a little raised, the temperature moderate—a blister drew well and was dressed with ung. sabinœ. ℞. Rad. arnic. ℥ss. c. c. aq. font. ℥viij. ad reman. ℥v. sub. fin. coct. inf. flors. arnic. ʒiij. colat. add. laud. liq. Syd'n. gt. xxx, liq. anody. Hoffm. ʒij. misce—a table spoonful every hour. He took for drink sago with wine, and had warm jugs applied.

In the evening—he has vomited and purged once; the pulse was small, but quite perceptible; the temperature moderate; the distress at the precordia not great.—Directed a glyster with 30 drops of laud. ℞. Camph. trit. gr. xxxij. gum. arabic q. s. aq. menth. pip. ℥yj—a table spoonful every hour. The blister to the neck was renewed.

October 13th, morning—slept some last night, towards morning he vomited bilious matter, and and had many thin brownish passages; the tongue coated yellowish, the temperature natural, the pulse tolerably distinct—no spasms, frequent eructations; the pain in the precordia slight. ℞. liq. c. c. succinat. ʒi. tinct. castor ʒij.—20 drops every hour on sugar.

Evening—Congestion of the head—the pulse small, face red, much restlessness, vertigo, rather unconscious; skin cool.—

A man named Neuter, aged 53 years, lived in a deep cellar —sickened on the 11th October, and died the 13th.

Outward appearances—The fingers locked inwards, the muscles of the arms contracted; the lower extremities bent inwards, the hands livid, and the head turned backwards.

Opening of the head—upon removing the skull, there appeared a mass of thick blood; the vessels of the brain were turgid with blood, the dura mater strongly attached to the skull, through the substance of the brain was seen a serous fluid; the ventricles filled with serum, a little serous fluid flowed out of the spinal canal.

Opening of the chest—the lungs slightly attached, otherwise healthy, injected with carbonized blood; the heart closely attached to the pericardium—not a drop of fluid in it; the heart flabby—left ventricle entirely empty, the right well filled; in the ascending aorta much dark blood.

Opening of the abdomen—the intestines appeared in a contracted condition—the stomach not much puffed up, the liver somewhat pale, but inwardly full of venous blood; the intestines outside slightly reddened; the stomach contained a brownish mass; the mucous coat here and there somewhat reddened, also the duodenum—in the small bowels bilious matter, below thinner, of a feculent smell, the bladder violently contracted; the kidneys turgid with venous blood, also the *arteria curalis;* the descending aorta filled with venous blood.

A man aged 50, named Bevern, a laborer, sickened with Cholera at 1 o'clock in the morning, and died the next day, at 12, that is, in eleven hours after the attack.

Outward appearances—The *facies cholerica* was not strongly expressed, the palms of the hands and soles of the feet were a little wrinkled, the extremities were livid, and strongly muscular.

Opening of the head—The dura mater was reddened, and injected with dark blood. The brain was soft, the vessels much injected; much blood flowed upon cutting them—both ventricles were filled with water, in each about half an ounce; plexus choroides very much injected; glandula pinealis empty; the cerebellum was very soft, and much injected—about an ounce of watery serum flowed from the spinal canal.

Opening of the chest—The left lung was somewhat attached, the right was not, but both were injected with black blood—the left ventricle of the heart was filled with a thin black blood, and also the aorta.

Opening of the abdomen—The left lobe of the liver was enlarged, the whole substance paler than usual; upon making incisions dark blood flowed out; gall bladder not particularly full of bile, but it was thick and viscous; the spleen somewhat in-

jected—the intestines reddish livid; some whitish fluid in them; the kidneys healthy—in the stomach were seen flocculi floating in a yellowish fluid; the bladder was much contracted and empty.

John Uhl, aged 22 years, sickened of Cholera, on the 12th of October, and died at midnight of the same day.

The treatment was so extraordinary in this violent case of disease that, I have thought proper to notice it.—Long continued rubbings with ammonia and turpentine, and warm jugs—venesection to 6 ounces, from two veins, which was of a tarry color, and consistence—Two hours after this small bleeding, a draft of a few ounces of infusion of peppermint, with 20 drops of laudanum, and 20 of tinct. castor—afterwards, ℞. Infus. menth. pip. ℥xij. lig. c. c s. tinct. thebaic, tinct. castor, a gt. 20. Of this two table spoonsful was given every two hours. Twenty leeches were applied to the region of the liver.

Outward appearances—The head bent backwards, the eyes violently drawn inwards, the nose pointed, the fingers drawn inwards, the hands livid, the legs bent, belly flat.

Opening of the head—Upon removing the skull, the dura mater was seen injected with dark blood; no water in the ventricles, but much water flowed from the spinal canal.

Opening of the chest and abdomen—The lungs much loaded with blood; but little water in the pericardium, the heart large and flabby, in the left ventricle much coagulated blood, also in the right—the intestines much inflated, and reddened on their outward surface; the bowels in a contracted condition—the bladder closely contracted, and without a drop of urine in it; the gall bladder full—the spleen much injected with blood, and easily torn; the arteria cruralis and radialis filled with venous blood.

Case of Henry Berg, 41 years of age—This patient was sent to the hospital on the 14th of October, and died the next day at 12 o'clock—he was treated, as all the other cases, without one single active medicinal agent.

Outward appearances—The head was drawn back, the arms contracted inwards, the lower extremities very stiff, the whole appearance haggard; the eyes violently drawn upwards.

Opening of the head—The dura mater much injected; both ventricles filled with water—the arteria basilaris much distended with blood.

Opening of the chest—The lungs were sound; the heart somewhat large, otherwise healthy; a little water in the pericardium—no blood in the left ventricle, the right quite full.

Opening of the abdomen—The lower very full of venous blood; gall bladder moderately filled with bile, the outer coat of the intestines slightly reddened, feculent matter in the small intestines;

the spleen very soft; the bladder violently contracted, and contained a cream-like fluid; this was also seen in the pelvis of the kidneys.

John Kazell, 34 years of age, died after but a few hours illness.

Outward appearances—The head bent backwards; the eyelids open; the eyes turned up and backwards; and a blackish circle around the eyes; the nose pointed; blueish about the mouth; the belly flat and stiff, but not drawn inwards; the arms in the flexed position, as also the fingers; the hands blueish, as far as the wrists; the legs flexed; the muscles very rigid; the back of the fingers and toes wringled, (*plaited falten*).

Opening of the head—Upon cutting into the membranes of the brain, there was a striking dryness of them, so that they resembled parchment; the dura mater and brain filled with hypercarbonized blood. In the ventricles a good deal of water; the plexus choroides very turgid with blood; the brain otherwise sound.

Opening of the chest—The lungs somewhat attached, otherwise sound, but they were filled with hypercanbonized blood.—The trachea and bronchia contained a little reddish mucus; some water in the pericardium; the heart soft and lax, and large; much dark blood, resembling treacle, in both ventricles; in the right was a polypus, more than an inch long, broad and dense; in which was a hollow filled with a serous fluid.

Opening of the abdomen—The bowels disturbed in ther arrangement—a very feted smell, decidedly different from the smell arising from any other disease; the bowels outwardly considerably reddened; the inner coat of the stomach and intestines slightly reddish, and in them was a portion of blackish matter, and in the bowels the characteristic rice-water-fluid; an ulceration in the jejunum; the liver pale on its surface, upon cutting into it, little blood escaped; upon pressure there appeared to be a deficiency; the gall bladder filled with an inky fluid; the spleen soft, and much injected with blood; the kidneys contained a matter resembling pus; the bladder closely contracted, and empty.

Opening of the spinal canal—The brain and membranes reddened; some water under the arachnoid membrane; the spinal medulla somewhat reddened; but not more so than the brain, otherwise perfectly healthy; in the cauda equina nothing unnatural.

Examination of the arterial system—All the arteries, even the smaller, filled with hypercarbonized blood—the same was seen in the venous system.

Maria Harder, 24 years of age, sickened 26th October, and died the next day.

Outward appearances—The eyes drawn backwards, the head bent backwards; the face indicated the greatest despair; the extremities flexed.

Opening of the head—There was a general turgescence, and an effusion of serum.

Opening of the chest—The lungs were sound, but filled with venous blood; some water in the pericardium; the heart was large, and flaccid; both ventricles surcharged with venous blood, and this obtained in the large veins also.

Opening of the abdomen—The bowels somewhat deranged in their condition, outer coat slightly reddish, and in them the usual contents (masse); the stomach contained a portion of blackish water, which resembled tinct. of capsicum in its smell, and was slightly sourish; there were several dark red spots on the inner coat of the stomach; the liver pale on its surface, turgid within with hypercarbonized blood; the gall bladder filled with acrid bile, of an inky blackness. The spleen soft, and injected with dark blood—the kidneys sound, except that they contained a portion of purulent matter; the bladder closely contracted—the uterus on its under side very red.

Opening of the spinal canal—The coats of the spinal brain were much distended, and contained a large quantity of clear water; and, the cauda equina also much reddened. The quantity of water not easily or precisely determined, but it was certainly at least half a pound.

Remarks.—Among the singular facts attending the extension of the Cholera, we notice that, in Harborg, a little town across the river Elbe from Hamburg, there was not a case of Cholera up to the 6th of November.

Remarks upon the dissections—We have been led to believe, that the dissections made at Hamburg are highly important, since they are calculated to enlighten us in the pathology of this terrible disease.

The reader will have observed that, in every case the most strongly marked signs of disease were seen in the brain; and it is not a little remarkable that so great a degree of turgescence of the vessels, and such considerable effusions of watery fluids, should have taken place in so short a time.

We observe that the bladder was strongly contracted, in every case, a consequence probably of the high excitement of the brain. We see occasionally turgescence of the lungs, of the liver, and in most cases reddening of the inner or outer coats of the stomach, and intestines, sometimes of both; sometimes turgescence of the lungs, of the spleen, the kidneys; but, in all this, except the slight reddening of the coats of the stomach and intestines, there is no uniformity; they present themselves

rather as accidental associations, which nevertheless serve to shew the potency of the cause, or morbid phenomena in the disease before us. But the brain, in all its parts, seems to have been the throne of the disease, and death seems to have achieved his remorseless purpose, by running the vascular structures of the brain into an overwhelming excitement.

We are free to express as our opinion, that, this disease is, in most cases, a deadly foe; and that, in many cases, its course is necessarily fatal: but if we may reason on this subject at all; if we know any thing of the nature of increased action, of turgescence, of effusion; then we have an undoubted right to conclude, that Cholera is most likely to be arrested, by copious bloodletting, at the very commencement of the disease; we are aware that, in very many cases, the subjects of this disease are not those who best bear free depletion, but, nevertheless, such is the violence of the disease, so obviously is it a disease of high excitement, that nothing can be more clear, than that it is to be treated by copious depletion. But we must bear in mind, as well on account of the nature of the disease, as on account of the frailty of the constitution of most of those who suffer from Cholera, that depletion, to be useful, must be prompt, energetic, decisive, that is, the disease must be checked in one or two bleedings, or the patient is lost. As regards ourselves, we must acknowledge, that we are now theorising, but the experience of others support the views we have just expressed; we shall therefore, now proceed to notice some practical observations.

We shall first notice so much of a letter, from our excellent friend doctor Gerson, of Hamburg, as relates to Cholera. This letter is dated at Hamburg, Dec'r. 24, 1831.

"The Cholera, (says our correspondent,) which has now existed with us a couple of months, has not been very much extended here, as the number reported till to-day is 880; it is principally among the poorer classes, so that, I have had only a few to attend; and have made my observations particularly at the hospitals. I must observe that though the disease is nearly as fatal here as it is in other places, it is not so violent in its appearance."

"It is a disease in general baffling our exertions; and, its whole pathology is yet obscure. As to its contagiousness you will find sufficient matter in the pamphlet to show, that its importability appears a mere imagination."

Before offering a few practical remarks upon Cholera, we have deemed it proper to quote a few observations upon the morbid appearances, as seen in the dissection of the patient who died of Cholera at Moscow. We extract from the Edinburg Medical and Surgical Journal for October 1831:—

"The extract, (says the editor of that Journal,) from the report of our countryman, doctor Keir, of Moscow, supplies the first complete account we have seen of the morbid appearances observed in the Russian epidemic, and we shall therefore transcribe it here *verbatim*, requesting the reader to compare doctor Keir's description with that given of the appearances in the Indian Cholera by the report of the Madras presidency, and extracted in this Journal xxiv. 200. The Russian account runs thus:—

"The appearances in the dead bodies were not uniform, and varied according to the duration of the disease, and the circumstances under which the patient had died. As this was the case, I conceive the most satisfactory way by which I can answer the inquiry on this head, will be to transmit the printed accounts of the dissections made at Moscow, and presented to the medical council by its members, who occupied themselves the most with this part of the duty," while I add here, the impressions made on my own mind by the dissections at which I was present.

"The extremities were, in general, more or less livid and contracted, and the skin of the hands and feet corrugated, the features sunk and ghastly; on opening the skull the blood vessels of the brain and its membranes were more or less turgid with blood, particularly towards the base; the arachnoid had sometimes, in several places, lost its transparency, and adhered to the pia mater; a fluid was sometimes effused in the convolutions of the brain in some quantity, and more or less serum in the latteral ventricles. The blood vessels of the vertebral column and spinal chord, were more or less loaded with blood, which was sometimes effused between its arachnoid membrane and dura mater. Partial softening of the substance of the spinal chord was sometimes met with, and marks of inflammatory congestion in the larger nerves. The lungs were generally gorged with dark colored blood, the cavities of the heart filled with the same, and frequently containing polypous concretions. In all the dissections I was present at, very dark colored blood, which, when extended on a white surface, resembled the color of the darkest cherry, was found in the arch of the aorta, and in other arteries.

"The state of the abdominal organs varied considerably.—The stomach and different parts of the intestines were frequently found to be partially, but considerably contracted; the internal surface of the stomach seemed to be little affected. A whitish or yellow fluid matter, resembling the evacuations, was frequently found in different parts of the alimentary canal, which now and then contained a good deal of air. In either case, both stomach and intestines bore marks of congestion, and of a subinflammatory state, varying from dark colored spots of small ex-

lent to several inches, affecting the whole internal circumference of the intestines. The color of these parts also varied a good deal, from dark colored venous congestion to rose-colored inflammation. In one case the internal surface of the stomach was so strongly and so generally turgid of a very dark color, that it might easily have been mistaken for gangrene. On exposing the stomach between the eye and the light, it was evident that there was neither gangrene nor solution of continuity, but that the dark color proceeded from a very general and great congestion of a very dark colored blood in the vessels of the organ. The subject of this case I was told, had died of symptoms of a typhoid nature, after suffering from the usual symptoms of the epidemic. Excepting in this case, which was evidently one of congestion and not of inflammation, I saw nothing in the morbid appearances from which a conclusion could be drawn, that inflammation was a very general morbid change in the alimentary canal, or a common cause of death: however, by its presence in the second period of the disease, it might add to the general irritation, or, even as a consequence of preceding congestion, be itself occasionally the cause of the fatal event. Both stomach and bowels were sometimes of a paler color than natural, both on the outer and inner surface; but neither thickening nor condensation from inflammation, nor exulceration, destruction of substance, nor abscess, appeared in any of the dissections I was present at.

"The liver was generally pretty full of dark colored blood; the gall bladder frequently much distended with tenacious ropy bile, of a dark yellow or green color: the gall ducts sometimes contracted, at other times not; the appearance of the pancreas, spleen, and kidneys was various, frequently differing but little from their natural state, in other cases rather surcharged with blood; the urinary bladder almost always collapsed and empty, the uterus generally natural."

The reader will readily recognize a very striking similarity between the appearances on dissection, as reported by doctor Keir at Moscow, and those related by doctor Fricke at Hamburg.—And it is particularly mentioned by doctor Keir, that there was more uniformity in the evidences of congestion of the brain, &c. than of the other viscera; this fact we have pointed out, as existing to a very marked degree at Hamburg.

The Edinburg Journal, from which we have just quoted, has given us a slight review of the works of doctor Hawkins and Mr. Bell—after some introductory remarks, of an historical nature, and a brief notice of a good compilation by doctor Hawkins, of many of the more interesting reports, which have been made in different places, the editor calls our attention to the

book of Mr. Bell, on the disease in question. We are told that:—

"The most satisfactory part of Mr. Bell's treatise is the article on the treatment. We have no where, indeed, seen it more clearly, fully, and simply explained. In common with other practitioners who had occasion to treat the disease in the East Indies, he considers bloodletting the principal remedy. He recommends that it be had recourse to in the most unpromising circumstances, as he has known its employment successful in cases where the individuals appeared almost at the point of death; and he agrees with all his predecessors, who have recommended this measure, that in no case where it has been possible to persevere in bloodletting until blood flows freely from the vein, and its color is recovered, will the patient die from that attack of the disease. He directs that when the blood has once begun to flow, it is to be allowed to escape, till these changes be observed. The ordinary rule for the use of venesection in acute diseases, namely, to continue till syncope comes on, is here inapplicable, as it is extremely difficult to induce fainting in patients affected with cholera. Its effects he considers to be purely mechanical; it relieves the congestion of blood in the great veins and lungs, and partly on this account, partly by the mere diminution of the mass to be moved, enables the circulation to go on.

At the same time that the practitioner is drawing blood, he must resort to proper means for maintaining the temperature by external warmth, and for stimulating the system by the use of opium, ether, camphor, ammonia, brandy, calomel, or some of the other remedies which have been variously relied on for the purpose. External heat, he informs us, is best applied in the dry way, as the skin, on account of the great reduction of its temperature, cannot endure the rapid communication of heat by the warm bath. He has given simple directions for applying dry heat, for which we must refer the reader to his treatise."

We are sorry that the editor of the Edinburg Journal has not furnished us with some account of the means used by Mr. Bell for the application of dry heat. We consider this a matter of vast importance, and it appears evident, we think, that the trials which were made of the warm bath at Hamburg, were almost, if not uniformly prejudicial. Jugs and bottles filled with warm water afford a ready method of applying dry heat—heated salt, sand, or ashes, could be readily enough applied, by enclosing them in bags, to be partially filled, so that they could be spread over the extremities, &c. the former seems to be particularly well suited to the end in view.

It is said, that among the internal remedies, those on which he relied in his own practice, were opium, camphor, calomel, and brandy,—all of which were usually administered, in the progress of each case. "He objects warmly to the practice generally adopted in India, of prescribing these articles in inordinate doses, and maintains, we believe, with great justice, that some individuals whose cholera was checked by them, died nevertheless in consequence of the poisonous operation of the drugs, which, by the sudden cessation of the discharges, had accumulated in too great quantity in the body. His method was to administer, so long as the vomiting was violent, three grains of calomel, two of camphor, and half a grain of opium, in the form of pills, every half hour—the pill being washed down with a little brandy and water. After the vomiting was a little subdued, he substituted a draught of half an ounce of camphor julep, with half a drm. of ether, and ten drops of laudanum, which was administered every fifteen minutes or half hour, according to the urgency of the case.

"These, according to our author, are the leading objects to be kept in view in the treatment of the early stages of cholera; and they will always be found successful, if they have the effect of restoring the radial pulse, the temperature of the skin, the natural color of the face and nails, and, in particular, the secretion of urine. But if, notwithstanding every effort, arterial action remains imperceptible, the coldness of the body continues or increases, a cold clammy perspiration breaks out, and jactitation ensues, there is little reason to hope for a favorable termination.

"The remaining indications to be fulfilled in the treatment, are to guard against local congestion—to ward off reaction—and to produce a healthy action of the bowels. Congestion, after the primary stage, or stage of collapse is over, is most apt to occur in the liver and lungs, but sometimes also in the head; and this was combatted chiefly by local abstraction of blood. The restoration of the healthy condition of the bowels, when it did not follow the employment of the remedies used in the early stage of the disease, he found most easily accomplished by a combination of a scruple dose of calomel, with brisk purgatives administered soon afterwards. When by one or two applications by this practice the stools have become feculent, the patient may be pronounced safe; and tonic remedies, with a generous diet and regular exercise, must be gradually resorted to, in order to confirm his convalescence and prevent relapse."

The Journalist before us concludes his review with some remarks upon the report of the London Special Board of health—it is said—

"The last part of the report of the London Board, to which we shall advert is the concluding sentence, where, after stating the preliminary measures to be adopted in any district of the country in which the disease may appear, it is added, that "in the event of so great a calamity falling upon this country as the introduction of this disease, rules and regulations upon an extensive scale, suited to the rigid system of quarantine, which such an event would demand, will be immediately circulated by the Lords of his Majesty's most honorable Privy Council, who will, on the earliest intimation of the existence of the disease, send down a medical practitioner, who has been acquainted with the disease as it occurred in India."

"On this announcement we have one or two remarks to make, and then we shall dismiss the subject for the present. The London Board, if the above intimation means any thing at all, appears to contemplate the vigorous enforcement of quarantine by sanitary cordons, whenever the disease appears in Britain. In reference to this proposition, we beg to suggest the following queries, which we shall be happy to find satisfactorily answered. In the first place, what substantial benefit has been derived from the vigorous quarantine and sanitary cordons established on the continent? Have they appeared to moderate in any single unequivocal instance? Have they attained any object worth the immense expense and most serious interruption of trade, commerce, and general intercourse which they necessarily involve? Secondly, granting the system of quarantine and cordons to have proved beneficial on the continent of Europe, what chance is there of such a system being faithfully and effectually enforced in this land of liberty? If the command of an almost unlimited military force has proved insufficint to despotic Russia, and in Austria and Prussia, whose governments are scarcely less strong handed, is it possible to institute an internal quarantine of the slighest value, in a country where the whole disposable troops amount to a few thousands, and the police, even if its authority were sufficient, (which assuredly it is not,) is barely extensive enough for the ordinary purposes of municipal government. Thirdly and lastly, granting we had the means of enforcing an exact internal quarantine, is there sufficient evidence to warrant its institution as a means of checking the epidemic? Is the medical board satisfied—for certainly we are not—that the best means of checking its progress is not, on the contrary, to disperse the population, wherever it is crowded, over the adjoining country on the first alarm?"

Such then being the fact respecting the cholera, that, whether it be contagious or not, it has long since been made absolutely certain, by the most vigorous enforcement of quarantine and

cordons, that the disease cannot be stopped in its wide spreading career, what greater absurdity than the eagerness, which is still manfested, in keeping up vexatious measures which can have no retarding influence?

Since the publication of the review under notice, we have, in common with the general reader, seen various affecting accounts of cholera, as it appeared in Britain, and in France. But we do not know that any thing particularly important has transpired, in respect to its cause, its nature, or its treatment.

We would just further mention, that there appears to be an increasing preponderance of opinion among those best qualified to judge, that the cholera is not contagious. As we are in daily expectation of receiving more recent and better authenticated accounts of the disease, as seen and treated in Britain and France, we shall here close our observations, upon this truly important subject, still hoping we may have it in our power, before the completion of the present number, to afford our readers further information.

ART II. *Case of Axillary Aneurism, cured by tying the subclavian artery By* WM. FERGUSON, *Fellow of the Royal College of Surgeons of Edinburg.* [*Taken from the Edinburg Medical and Surgical Journal.*]

MARK ROBSON, æt. 60, from Kelso. In the right axilla there is a large pulsating tumor extending under the pectoral muscles as high as the clavicle; a portion as large as an orange projects into the axilla; and on being handled, its contents appear very fluid. The skin over the whole tumor is of a natural color, but the veins appear considerably enlarged, and somewhat tortuous.

The man thinks that the disease has existed more than two years, although for many months it was scarcely perceptible.—It has only been within these six weeks that it has increased rapidly to its present state, which is, as near as I can guess, about the size of a large fist. The pulsation is in both arms alike, about 80. The heart and arterial system elsewhere, appear perfectly healthy. No cause can be assigned for the original appearance of the disease; but the patient is inclined to think that he might have got a rack in his arm during one of his drunken fits—a vice to which he has been strongly addicted throughout the last forty years of his life. He was originally bred a cobler to trade; but during the above period, his principal occupation has been to attend all fairs, races, and elections of members of parliament, within fifty miles of his native place; on which oc-

casions he had frequent opportunities of indulging in his favorite habits.

At a consultation with Sir Ballingall, doctor Simson, Mr. Milder, and Mr. Purves, surgeon, from Kelso, the operation of tying the subsclavian artery was decided on, and in every respect, with the exception of the man's advanced age and his previous habits, the operation appeared to them to afford a fair chance for the patient's life.

May 12th, 1831—I accordingly performed the operation in the presence of fourteen of my professional friends, among whom were Sir George Ballingall, doctor Knox, doctor John Campbell, doctor Simson, and Mr. Purves. I made an incision through the integuments at the root of the neck, parallel with the clavicle, and a little above it, which extended from the middle the breadth of the sterno-cleido-mastoid muscle, outwards to the anterior margin of the trapezius, I then divided the fibres of the platysma myoides, and cautiously cleared the lower part of the external jugular vein, which was held aside with a blunt hook during the remainder of the operation. The lower belly of the omo-hyoid muscle was then exposed, and after cutting through the layer of pretty dense cellular substance which binds it to the clavicle, I experienced no difficulty whatever in breaking down the loose cellular membrane, lying between me and the artery, with the handle of the scalpel. Several veins were exposed during this part of the operation, running towards the subclavian and internal jugular, which, although frequently of very considerable size, during expiration or the struggles of the patient, I was enabled to avoid injuring, by using the handle of the scalpel as much as possible. I exposed the anterior scalenus muscle, which was effected the more readily, by cutting through a few fibres of the clavicular portion of the sterno-cleido-mastoid muscle; [this author here says in a foot note that "this is a proceeding which I would always adopt in future, wherever this portion of muscle was extensively attached to the bone; and more particularly, if I thought there would be any necessity for cutting a portion of the anterior scalenus, in order to trace the artery nearer the heart. When doctor Gibbs, of St. Petersburg, tied the subclavian, he cut through the whole of the clavicular, portion of the sterno-cleido-mastoid muscle, and found that by doing so the operation was much facilitated."] Doctor Ferguson continues to say, after having cut a few fibres of the sterno-cleido-mastoid, that "then I came down immediately upon the artery lying in its usual situation. Here, unless I had been perfectly familiar with the position of the vessels, I could not easily have discovered it; for not one of the individuals present who assisted me could detect the slightest motion or pulsation, even when the

finger was placed against the vessel. I had no difficulty in introducing an aneurismal-needle, provided with a ligature, under the artery; and then by impressing it over the needle, all present were at once convinced that it was the vessel, as the tumor fell flaccid in an instant, and all pulsation ceased in it as well as in the arteries at the wrist. I tied the ligature with my fingers alone, having no necessity for using any of the various instruments recommended in cases where the artery lies deep; and as the thread was very thin, (unwove purse-silk,) I left both ends hanging out of the wound." (Is it not an astonishing fact that, European surgeons as well as some of the American, so obstinately reject the animal ligature, with all its advantages, and to which no one objection can be alledged.]

I several times, during a long continued expiration, observed the internal jugular swelling over the surface of the anterior scalenus muscle. I also saw a large artery, which I took to be the deep cervical, coming off from the subclavian, between the scalenus muscle, and was careful in tying the ligature to keep it as far from the vein as possible. (Sir A. Cooper is almost the only author who speaks of any material interruption in tying the arteries of the neck from the internal jugular veins,)

During the operation, the *margin* of the anterior scalenus was of essential service in guiding me to the artery, and I found in the living body, as I have very frequently experienced in the dead, that the turbercle on the first rib into which that muscle is inserted, was not to be depended upon, as it is never so distinct when this muscle is present as on the maserated rib, on which it forms a very distinct prominence.

In consequence of the clavicle being a little raised by the size of the tumor, the artery was situated at a very considerable distance from the surface, more than two inches, yet, notwithstanding the depth of the parts, I scarcely ever saw a less bloody cutting operation, for I am sure there was not half an ounce of blood lost.

I closed the wound with stitches, and covered it with a small piece of caddis.

From the day of the operation up to the 1st of June, nothing very remarkable occurred in the case. Pulsation never returned in the tumor; but from the evening of the day on which the operation was performed, it could occasionally be felt at the wrist. The patient often complained of pain about the lower third of the arm; but this gradually went off. The incision had completely healed, saving the point where the end of the ligature hung out. (Admirable folly, to hang out a ligature as a sign of perverse obstinacy—why not use the buckskin and cut it close!!) The margins and neighboring parts were thrice attacked with

erysipelas, which was checked by the application of cold wet cloths.

On the 13th of June, the ligature came away after a smart tug, and a portion of the artery half an inch, and about half its circumference came along with it. I have no doubt, from the direction in which it came, as I pulled it out, that it had been nearer the heart than the ligature, and from its length it must have come off from a large artery, which I observed arising from the subclavian during the operation. When the ligature was removed, it appeared that that part of it which lay in the wound, was two and a quarter inches long, showing how deep the vessel must have been before the operation. No blood followed the removal of the ligature, and the portion of the artery which came along with it must have been separated from the other part many days, as it was quite putrid, and had a very offensive smell.—During the whole of this day he felt remarkably well. On the 14th, when I visited him in the morning, I found he had got little or no rest during the night. He complained of nothing else, however. There appeared to me to be a very slight blush in the neighborhood of the wound, and a thin fluid was discharged from the opening. In the middle of the day, when my friend doctor Miller visited the patient, he was very uneasy, complained of pain in the situation of the neck, which was increased on pressure, and the sore appeared larger than usual under the clavicle, but in the axilla it was of its former size. Cold wet cloths were applied over the wound and tumor, and doctor Campbell saw him shortly afterwards and approved of what had been done. When I visited him at 4 o'clock, he was much better, but still complained of pain in the tumor, which I observed had much increased in size since the morning. He had a slight pulse at 90; and little or no appetite. His bowels were kept open—with small doses of castor oil, and the cloths were kept constantly applied. For several days he was in a very uncomfortable condition; the tumor increased rapidly at one time, and as rapidly diminished; but it never became as small as it had been previous to the use of the ligature. On the 16th, a little blood was observed to ooze from the wound, but it was soon stopped. I was sent for at 7 o'clock in the morning, on the 17th, in consequence of the bleeding having recurred; but found it had ceased before I had arrived; about half an ounce in quantity having been lost. The patient said it spouted past his ear with considerable fury, but it was stopped by his wife placing her finger on the wound, which was now not larger than that made in opening a vein in bloodletting. The swelling had increased very much over night, and I was inclined to think the blood was getting down in front of the tumor, but where it came from was a matter not ea-

sily decided on. During the day I kept several assistants setting beside him in case the bleeding should return, but fortunately it did not. I dressed the wound at 3 o'clock P. M., and squeezed out several small sloughs. In the evening his pulse was 100, but he felt pretty well. On the 18th he was rather better, and the discharge from the wound, which the day before had been thin and bloody, was improved. Sir George Ballingall and doctor Knox saw the patient, and it appeared to them, as it now did to me, that an abscess was forming in front of the tumor. By their advice the patient was removed to a lodging in the vicinity of the town, that he might have the advantage of a change of air. On the 20th, fluctuation appeared so distinct that I was induced to open the abscess, which I accordingly did, and squeezed out a very considerable quantity of fetid brown fluid. As the matter was very deeply seated, and it was in consequence necessary to pass the bistoury an inch and a half under the skin, I was unwilling to make a large cut at that time; but by the recommendation of Sir George Ballingall, I afterwards made it extensive enough to make a free passage for the matter, which was daily discharged in considerable abundance. Poultices were applied for a few days at first, and when those were discontinued, compresses were placed over the tumor, and kept there by a roller passed round the body. He had a bottle of ale and a glass of port wine every day, and whatever food he wished for. Under this treatment the discharge from the wound gradually assumed a healthy appearance, and diminished in quantity. The communication which existed between the wound, above the clavicle and that below, closed up, and the patient recovered in health and strength, so as to be able to take exercise in the open air. On the 8th of July, the opening above the clavicle, which was very small, suddenly began to ulcerate, and in twenty-four hours a cavity was formed sufficient to admit the end of the thumb. I touched the whole surface with lunar caustic, which had the desired effect of checking the ulceration. After this the cavity gradually filled up, and on the 15th of July it was nearly healed. As I now considered him completely out of all danger, I sent him off to Kelso, trusting that his wound would soon heal when he got to his native air; and I have since had letters from my friend Mr. Steuart, surgeon there, to whose kindness I am originally indebted for the case, saying that his wounds were healing fast, and that he considers the cure is perfect, the tumor having completely disappeared; indeed were it not for the opening which had been made into it, there would be difficulty at first sight in saying on which side the disease existed.

The above case appears interesting in many points, it shows that in advanced age, for the patient, although certain that he is sixty, thinks himself several years older, and even when the constitution has been shattered by much dissipation, we are justified in recommending an operation, and holding out a tolerable chance of success. Only a few weeks previous to his coming under my charge, he had occasion to travel a distance of 40 miles, a journey to which he took nearly a month, having scarcely been sober during that period. It shows also, that, notwithstanding the depth of the artery, in consequence of the elevation of the clavicle, no difficulty was experienced in passing the ligature under it, and tying the knot with the fingers alone. The former was perhaps more easily accomplished in consequence of the shape of the needle I used; and the latter, I have no doubt, was so easily done, from my having cut a part of the clavicular portion of the sterno cleido mastoid muscle.

When I had the honor of assisting my much respected teacher in surgery, professor Turner, he used to recommend in his lectures a needle of the shape annexed (this needle has the shape of the forceps and aneurismal needle of doctor Physick) more particularly for passing the ligature under the subclavian artery. The concavity on the back of the instrument is intended to allow it to play over the clavicle, as round an axis when the handle is depressed in raising the point.

ART. III. *Case of wound of the Ulnar Artery, at the heel of the hand, which was successfully treated by compression, after the ligature had failed. By* HORATIO G. JAMESON, M. D., *of Baltimore.*

A lad, son of Mr. L. B. of this city, came to my office on the 19th of February, 1832, and brought with him a note, from my friend Dr. Samuel B. Martin, desiring me to take charge of the case, and do whatever I might judge proper. The patient represented, that, six weeks previous to his calling, he had run a penknife into his hand, that it bled freely at the time, and continued to bleed from time to time; and, that yesterday, six weeks after the injury, he lost, as he supposed, about a quart of blood. He was very pale, and obviously frightened at the risk of further bleeding. During all the period above named, it had yielded to compression, when newly applied; but would break out at short intervals. Doctor Martin having been consulted yesterday, bound it up securely, and thus prevented further hemorrhage, till the bandages were removed at my office; but no sooner were they removed than there was a rapid flow of blood.

I found a small punctured wound about an inch in advance of the pisiform bone, apparently stuffed with coagulum, through which, or, rather, by the sides of which, the blood escaped in several streams. I immediately determined upon tying the ulnar artery, in the arm. An incision was made along the inner edge of the flexor carpi ulnaris. The artery was found beating feebly quite under the tendon, still it was sufficiently distinct to have enabled me to pass a small aneurismal needle under it—but, to my great disappointment, my needle, which I supposed to be in the case, was missing—I attempted to use the end of a silver probe, having an eye in it, but could not succeed—in this way time was lost, the parts became injected and the artery ceased almost entirely to beat. After considerable delay and difficulty, I found the artery lying along the outer edge of the tendon, so that it became necessary to dissect off the muscular fibres from the outer edge of it. I then drew the tendon inwards, by means of an animal ligature, passed under it for that purpose. The ulnar nerve appearing directly along the edge of the tendon, I now passed an animal ligature, by means of a common suture needle, round the artery, taking care to leave the nerve out. This ligature being tied the wound was dressed by means of one suture, and some sticking plaster. Every thing seemed to go on well. On the 4th day the wound was opened, and it had nearly healed, one small point in the middle excepted, when I was surprised to see a portion of the animal ligature softened, broken, and making its exit from the wound. The original wound looked ill as if filled with coagulated blood, and, though inflamed, it showed no disposition to heal.

Things seemed to progress favorably till the 7th of March; on this day, which was 19 days after the accident, the patient came to my office, in a state of great alarm; the wound having bled freely about half an hour before; but, as usual, it was checked by compress and bandage. He stated that he had felt a beating in the part during the preceding evening and night, that the hemorrhage came on while he was quietly walking in the street—he had not used the hand except a few times, within the last day or two, in making a little lint, to dress the wound. Upon removing the dressing the blood spouted freely, but it could be seen to come from the lower end of the divided artery, which was ascertained by applying the finger alternately to both ends of the tumor, which had now formed. This tumor though not much elevated, pulsated violently. I found, upon pressure, that, there was a cavity formed in the palm of the hand—this I now resolved to lay open. I introduced a button pointed bistoury into the sack, and split the parts open, first upwards, and then

downwards. This gave exit to a good deal of grumous blood. Not finding room to get easily to the bottom of the wound, I took a scalpel, and extended the wound upwards and downwards, so as to make a wound of more than two inches along the course of the artery. In doing this, I out several arteries which bled freely, in consequence I suppose of their having become enlarged, by the excitement which had so long existed in the part. I found considerable difficulty in taking hold of any of the arteries, owing to the injected and discolored state of the parts within, and the apprehension, that by using the needle, the nerve of the little finger and the next, might suffer injury.

In this state of things it occurred to me, that the hemorrhage might be most easily arrested by means of direct pressure, which I perceived could readily be applied. A piece of soft wood, about two and a half inches in length, by $\frac{3}{4}$ of an inch in width, was cut from a piece of pine board, and laid into the wound—being a little longer than the wound, a little pressure was used to force first the lower end against the end of the wound, while the body of the block was pressed down into the wound; then some pains were taken, by pulling the upper angle of the wound a little upwards, to make the other end of the block enter the wound, so as to press with its end against the upper angle of the wound. In this way I obtained a firm pressure upon every part of the wound, and, yet, there was a sufficient outlet by the sides of the block for the blood to escape, should any flow from the vessels, and thus prevent the risk of injecting the adjacent parts. The block being held firmly down upon the bottom of the wound, and having a sufficient resistance by the bones and aponeurosis below, was made to maintain its place by laying upon it a graduated compress, and the whole was now secured by a roller.

Upon opening the wound on the sixth day, I found that a kindly suppuration had taken place, the block was quite loose, and that part of the wound which was ill-looking, from having been long injected by the blood, had granulated very well, and looked clear and healthy. I filled the cavity gently with lint, and dressed the wound with a roller slightly applied.

Remarks.—I consider the above a very interesting case, and calculated to furnish a very important precedent in wounds of the arteries of the arches, both of the feet and hands.

It has been familiarly known to surgeons long since, that much difficulty attends wounds of the plantar and palmar arteries.—Mr. John Bell has depicted this subject in his usual animated and skilful manner—which is every way calculated to awaken our most serious attention. It has fallen to my lot to see several cases of this kind, but up to the present one, I have always

found, that however little success attended the efforts to arrest hemorrhage by pressure, while the current continued direct, still, whenever the main or directly supplying artery was tied, the recurrent flow of blood could be arrested by compression. And I have been in the habit of teaching as a general rule of practice, that we might rely on pressure after tying the main artery; but, here as in all other cases, I have been careful to apprise my classes, that no rule can be relied on in all cases, and that while we give preference to the milder methods for securing surgical ends, so long as they are known to be almost uniformly successful, we must always move under the conviction, that even the best concerted plans, and the most successful operations, are liable to fail.

But whatever opinions we may entertain in respect to the advantage of the plan of tying the arteries after this or that method, it appears too clearly, by the observations of Mr. John Bell, that tying the arteries in the foot or hand, after the parts become injected and swollen, is almost out of the question, on account of its difficulty; and my case shows, that tying the ulnar, will not always succeed when that artery is wounded—what then is to be done? the presumption is, that if you tie the ulnar artery, and then lay open the aponeurosis of the hand, you will wound other arteries, and thus give rise to new troubles. Shall we tie both the arteries in the wrist? This would be a very serious operation—and even this is not absolutely certain, for, if as in the case before us, the parts have been injected with blood for weeks before we are called in, and they are thus prevented from healing, the effort which nature has to make, in establishing a new circulation, will have enlarged the arteries, and, in this way we may have secondary hemorrhage set up.

The circumstances of the case before me, together with its favorable termination, has led me to believe, that the method which I have practised is vastly important, as well on account of its efficacy, as on account of its simplicity, which will bring it into the power of every practitioner, while none but those well versed in anatomy, and conscious of some surgical dexterity, will attempt to tie the arteries in the ankle or wrist. I would therefore recommend that instead of tying these arteries, whether the case be recent or protracted, that we make an incision into the hand or foot, of an inch and a half, or more, in length, according to circumstances, and, pressing open the wound, lay a piece of wood into it. The block should be lapped with soft old linen, and pressed well down; and, particularly, we must see that it presses against the ends or angles of the wound, and that it be well pressed down, by a thick compress, so arranged as to press on the block only.

In this way, a practitioner, but little accustomed to the scalpel, may safely venture to split open the parts, to the bottom of any sack which may have formed, or, if the case be recent, he must cut down pretty well into the muscles, and then apply his compression.

ART. IV. *Case of Protracted Pneumonia with Dropsy, successfully treated with elatin.*

LIEUT. H. S. of the United States Navy, was much reduced by protracted sufferings, in the year 1825. The following account of his case has been taken from the diary of his physician.

"September 3, 1825.—He has been complaining of ill health since his return from the West Indies some months ago. Complains most at present of indigestion, is emaciated; suffers from palpitation; dyspnea; and a fulness and soreness of the abdomen; inability to lie down—Venesectio ad ℥xviij.

"4th.—Was much relieved by the bleeding yesterday, but feels weak and coughs pretty much. Advised 10 grs. of calomel, to be followed by a dose of castor oil.

"5th.—The patient feels much relieved. Prescribed the following pills—℞. Pulv. rhei ʒj, tart. ant. gr. iij, submur. hydr. gr. xvj.—Pil. no. xxxij—one to be taken morning, noon, and night.

"8th.—Mr. S. has been to the country, and has been fatigued; his dyspnea has returned. Advised a dose of calomel and rhubarb.

"9th.—There has been a severe attack of the difficult respiration. He threw up his dinner and felt greatly relieved. There is obviously some enlargement and tenderness of the left lobe of the liver. His skin is cold, pulse feeble, but not otherwise much amiss. Advised him to take two of his pills twice a day, (calomel and rhubarb.)

"11th.—The pills have operated well, and he has felt better, skin cold, particularly in the morning—slight swellings of his legs. Advised tea spoonful of best yellow bark every two hours, beginning in the morning at five o'clock.

"13th.—The swellings of his legs have increased, but he has not had his attacks of dyspnea—pulse still feeble, and there is langour, with cool skin, loss of appetite. Now informed that he had a dropsical affection some years ago. Continue to take three doses of the bark daily; take wine glassful of strong horse radish infusion, with 5 grs. nitrat potash, every two or three hours.

"14th.—Seems to be doing well. Nothing worthy of remark since yesterday—continue as yesterday, &c.

"16th.—Somewhat better—the nitre sickens the stomach.—Directed to take half the quantity: this operates several times a day upon his bowels. The legs continue swelled, but there is some increase of strength.

"18th.—Health seems to have improved, though the legs seem to be more swelled—his cough is harrassing, violent and tight; some difficulty of breathing; skin cold, pulse small and hard.—Advised antimonial mixture with mucilage to night; and, for to-morrow, ℞. Elaterium, gr. viij, farin. q. s. pil. xvj—one to be taken every hour till they purge freely; and repeat this every second day. ℞. pulv. doveri ʒj—divid. in chart iv.—one to be taken at night.

"20th.—The Elaterium had no effect yesterday. The swelling of his legs has diminished considerably—his cough is somewhat better, although he renewed his cold by throwing off his covering while asleep.

"21st.—Medicine operated very copiously yesterday, and has relieved him much, the swelling has abated considerably. To take of the pills of elatin to-morrow as before, and continue the dovers powder as directed on the 16th instant.

"23d.—Five of the pills were taken yesterday, and they operated copiously and severely. Omit the dovers powder—Swelling much abated, a little remaining in the feet only.

"24th.—Three of the pills operated copiously to-day; swelling has disappeared, except a little on the left foot; cough much abated.

"25th.—The patient doing well—swelling has subsided so completely as to admit of his wearing his boots—cough also nearly gone. Advised two of the elatin pills to be taken to-morrow, with a view to prevent a return of the dropsical swellings.

"October 1st.—There is some return of the abdominal tension, but he still wears his boots, though there is slight swelling of the legs. He took two of the pills yesterday—they operated pretty roughly, but he feels relieved to-day. Advised him to take one pill to-morrow, and not repeat whether it operates or not,

"2d.—Has not been improving—continues very weak, and is troubled a good deal with dyspnea. Directed one of the pills to be taken to-day.

"3d.—Complains of considerable debility; and the cough has become more violent; dyspnea continues and a slight return of the swelling of the legs. ℞. Gum arabic. ℥ss., sp. nitri ℥ss., tart. ant. gr. j. aq. font. ℥iv. Mix—Table spoonful to be taken in the evening, and repeat every half hour till the cough abates, or till three doses are taken.

"5th.—Considerably better to-day—feet and legs are, however, pretty much swelled; cough though abated is still severe. Continue the cough mixture—use cold infusion of cammomile, and take one pill of elatin to-morrow.

"7th.—Thinks himself much better—Swelling considerably diminished. One pill operated freely and easily yesterday. The cough is now the most troublesome symptom; mixture last given has not sensibly relieved the cough. Take a pill to-morrow.

"8th.—I directed ℞. tinct. opii. ℥j. tinct. digitalis ℥j, sp. nitri ℥j, mix—Tea spoonful to be taken every night.

"10th.—Says he is improving, is stronger, but his legs remain a good deal swelled notwithstanding that the pill acted well yesterday. The digitalis, &c., has lessened his cough—I observed that his belly is a little swelled, and his breathing is a little laboring. Repeat the pill, and the digitalis at night.

"14th.—Respiration still incommoded, and his legs a good deal swelled—cough considerably abated. He has taken a pill to-day. Continue the digitalis mixture.

"16th.—Improving slowly, cough much relieved—Swelling of the legs continues. ℞. Elatin gr. ij. farina q. s. Pil. no. xvj.

"19th.—Has taken two pills to-day, and they operated freely; the swelling in his thighs has abated considerably, since he had several watery stools.

"23d.—Breathing still seems difficult, legs considerably swelled, but there is a little abatement. Thinks himself a little stronger. Has taken three of the pills to-day.

"28th.—Advised him to take two tea spoonfuls of crem. tart., with two table spoonfuls of gin. It purged him violently, but carried off no water; and instead of affording relief, it left him weak, and laboring under painful dyspnea. ℞. Camph. gr x. tart. ant. gr. j. submur. hydr. ℈j. Pil. xij.—one every three hours, with parsley tea.

"29th.—Feels better to-day, less swelling in the abdomen, legs much swollen. Advised confinement to his room, believing he has retarded his recovery by stirring about too much. Also directed total abstinence from animal food. Continue the pills and parsley tea. He thinks they have a diuretic effect.

"30th.—Rested very well last night, feels much better this morning—Swelling somewhat abated. Continue the pills, and infusion of parsley as before.

"31st.—Doing well—Swelling diminishing slowly—Sleeps well; bowels regularly open; passes good deal of urine. Continue the prescription.

"November 3d.—Improving—Swelling and cough both abated. Pills have operated freely on his bowels—Mouth pretty sore—Take 3 pills daily.

"5th.—Swelling abating—Bowels have been so much acted on as to produce a good deal of debility—Sleeps well—Mouth pretty sore—Spits freely. Suspend the pills till to-morrow, and then take two or three according to circumstances.

"7th.—Swelling continues to lessen, but when he sits up, his legs become swelled—No swelling of the abdomen. Pulse weak, skin cool, cough no trouble to him—Mouth continues pretty sore. ℞. submur. hydr. ℈j. camph. gr. x, tart. ant. gr. j. Mix—Pil. no. xij.—One pill twice a day.

"10th.—Continues to improve—But little swelling remaining Breathing better—Mouth still sore—Bowels quite free. Has been eating oysters, contrary to advice. Continue the pills, so as to keep up a moderate mercurial action. To keep his room, and avoid animal food.

"13th.—There is considerable improvement in his condition generally—Mouth still slightly sore. Continue the drops of digitalis, &c.; and take one of the calomel pills daily.

"22d.—Improves but slowly—Still some swelling of the abdomen, owing I believe to his eating gross food—Mouth slightly sore. Advised continuance of the pills as before.

"27th.—Doing well.

"Dec. 4th.—Return of difficult respiration, and some increase of swelling of the abdomen. Advised bathing abdomen with hot brandy, and take a Seidlitz powder every two or three hours, till they operate freely on the bowels.

"5th.—Has been but slightly relieved by the cathartic, although it operated freely—Still the difficulty of breathing continues—Evening find him worse, although he has been well purged during the day. Venesect. ad ℥xij.; by this his breathing was much relieved.

"6th.—Was much relieved by the bleeding—Rested tolerably during the night—Coughed a good deal. Advised continuance of the mercury, and aperients to obviate costiveness. Take the cough drops once every night, and repeat if necessary.

"8th.—Considerably better—Continue the same treatment.

"10th.—But little change since last visit—The belly still contains a portion of water, and is pretty tense—Mouth pretty sore. Advised him to go on as formerly with the pills and cough drops, and take a little salts as often as the bowels require opening.

"14th.—Better—Mouth sore, but he spits but little—Some cough—Abdomen somewhat distended. Take a pill every second day, and twice a week a dose of salts.

"18th.—Better in all respects except the swelling of the abdomen, which appears rather to increase. I am informed that his appetite is good, and he eats more than when in health. Continue calomel pill every other day.

"21st.—He took three of the ½ gr. pills of elatin, and they operated well, and carried off much water—No other change.

"26th.—He thinks there is a gradual improvement—He can walk better, and lie with his head lower during sleep—Abdomen still a good deal swelled. Took two of the ½ gr. pills of elatin, which produced 8 or 9 watery stools. This has afforded a great deal of relief.

From this time there was a pretty rapid improvement, which in a few months eventuated in a tolerable state of health, and the patient was put upon active naval duty, which he performed, we believe, for upwards of two years.

This gentleman has since died of a return of the same disease, and by one of those odd caprices, and acts of ingratitude for important medical attentions, he preferred another physician, in whose hands he died; without ever seeing the present writer, though always within his reach. We do not mention this fact by way of intimating that he would have fared any better in our hands, but it surely is a remarkable instance, of what we so often see, of persons very speedily forgetting our attentions to them, however important they may have been.

We have been induced to report the case, because we believe that the recovery under circumstances so unfavorable (in a case of complication of pneumonia and dropsy, both of which had existed long enough to assume something of a chronic character,) is worthy of notice—and the recovery we ascribe mainly to the elatin, since we believe that without it, he would have fallen a victim to his former disease. We have had several other cases, in the course of a few years practice, wherein we have obtained the most happy effects from the elatin in dropsy—it is, however, a rough article, and must be used cautiously.

ART. V. *On a variety of Uterine Hemorrhage, not hitherto described.* *By* GEORGE OAKLEY HEMING, Esq. *Kentish Town, member of the Royal College of Surgeons, London.* [*Taken from the Edinburg Medical and Surgical Journal, for October,* 1831.]

"Two kinds of uterine hemorrhage have hitherto occupied the attention of accoucheurs. The first is obvious to the patient or by-standers from being external, the blood flowing upon the bed-clothes; the second is generally recognized by its effects upon the countenance and on the action of the heart, in form of syncope. It is then found on examination, that the blood flow-

ing from the internal surface of the uterus has been retained by this organ, which is felt distended, and occupying a proportional space in the hypogastrium. Both these cases, then, are ascertained clearly on examining the condition of the bed-clothes, or the region of the uterus. Both are alike described as attended by the almost entire absence of uterine pain.

"The kind of uterine hemorrhage I am about to describe, differs from those in the absence of any material external appearance of hemorrhagy or of uterine tumor, and in the presence of uterine pain.

"The patient is first seized with severe recurrent uterine pains, each of which produces a slight discharge of blood; she is unexpectedly taken with symptoms of the most alarming syncope; there is but little blood upon the sheets; the uterus is scarcely at all distended, On a careful examination, the uterus is found to contain but a small coagulum, and but a small quantity of blood is found externally, but in the space between the os uteri and os externum, that is, in the space formed by the distended vagina, there is a coagulum of blood of the size of a child's head.

"It is important that I should insist upon this occurrence of uterine pains, for they are usually considered to denote security from uterine hemorrhagy. Denman observes, "the accession of uterine pain immediately proclaims that the danger is passing or past." They, on the contrary, frequently afford only a distinctive mark of the kind of hemorrhagy I am describing.

"Knowing the influence of terms, I would propose to distinguish these different kinds of uterine hemorrhagy thus; the first may be denominated the *external*, the second *intra-uterine*, the one I have described, intra-vaginal.

"Although, then, there be little external appearance of blood —although there be but little distension of the uterus—although there be severe pains—still if there be the appearance of syncope, we are to expect a dangerous degree of hemorrhagy, and this we shall find to be of the kind which I have described.

"The treatment consists in promptly introducing the hand, thus stimulating the uterus to contraction, and so to arrest the hemorrhagy, if this be proceeding at the time, and to induce the expulsion of the small coagulum within its cavity; and then in removing the whole of the coagulum from the vagina. The rest of the treatment consists in administering the usual remedies for alarming syncope, in applying cold to the region of the uterus, &c., and it is not peculiar to the particular form of *intra-vaginal* hemorrhagy. I need not, therefore, enter upon points sufficiently discussed elsewhere.

"Of the *intra-vaginal* hemorrhagy I have seen many cases.—Of three of these I have retained notes, which I proceed to de-

scribe. The case is indeed not of an uncommon kind, but it is certainly undescribed in any of those books on midwifery put into the hands of students. This brief account of it cannot, therefore, be without its utility.

"Mrs. C—— had an easy and natural labor, and had been confined about an hour and a half when the midwife sent for me. I was summoned because she had pains after labor, more frequent, and much more severe, than the midwife had been accustomed to witness. These pains continued to come on at intervals of two or three minutes. I was told that there was not as much as in ordinary cases, and I found, on placing the hand over the abdomen, that there was an effort of the uterus to contract still more at each pain.

"I should have expected at this time any thing rather that the woman's life would have been brought into danger by hemorrhagy, so slow was the discharge, so strong were the efforts of the uterus to contract, and so unlike was the case to all others that I have seen or heard of. She at length grew pale, her pulse became weak, frequent, and almost imperceptible, and she fainted. I passed my hand into the uterus, although it was but little distended, and found a small coagulum. There was, however, a coagulum in the vagina of the magnitude of a child's head, and there was rather more blood than usual on the bed-clothes. Upon withdrawing my hand the pains ceased, and the hemorrhagy stopped. Cold vinegar and water were applied to the abdomen; but I now do not think it necessary, for I believe the hemorrhagy was entirely stopped by removing the very small coagulum from the uterus, and the very large one from the vagina.

"Two months after the occurrence of this case, I attended F——. Her labor was not at all protracted, and during it no unusual circumstance took place. She complained after the placenta had come away, of pain coming on at intervals. She had experienced nothing of the same kind in her former two labors at the same period.

"The pains continued to come on at intervals of a few minutes, and were so distressing that she cried out at each time.—She at length grew pale, and complained of giddiness and faintness; there was a little discharge with each pain. I put my hand upon the abdomen, and found the uterus contracted nearly as much as in ordinary cases. I could not by feeling this organ through the parietes of the abdomen, at all suspect internal hemorrhagy; and the blood which had been discharged externally, though greater in quantity than usual, was not sufficient to produce any alarm. I suspected this to be a case like the former, and introduced my hand into the uterus. There was in it a coagulum not very large, but one more than four times its size dis-

tended the vagina. When these were removed the pains entirely subsided, and with them the slight discharge which had accompanied them.

"The faintness continued many hours, as the discharge of blood amounted to a very considerable quantity.

"The third case occurred in a near relative. Mrs. ——, after a tolerable easy labor, and twenty minutes after the placenta had come away, was seized with violent pains coming on at intervals of five minutes, and accompanied with a slight discharge of blood, so very trifling, indeed, that it excited in the attendants no particular notice. She, however, at length became pale, and complained of a faintness and giddiness. I put my hand upon the abdomen, and felt the uterus not more distended than usual. From the size of this organ I could have no suspicions of hemorrhagy. About seven or eight ounces of blood were passed out externally. Cold wet cloths were applied to the abdomen, but the pain continued, and the faintness increased. I introduced my hand and removed a very small coagulum from the uterus, and one five times the size from the vagina; and just at this time an additional quantity of fluid blood followed my hand.—This produced absolute fainting, which continued eight or ten minutes. During the syncope the patient was slightly convulsed, and just after she recovered became delirious, in which state she continued eight or ten minutes. In about four hours from the commencement of the discharge, small doses of opium were taken and a quiet night was passed. She was confined on Saturday evening, and on Sunday morning no complaint was made but of weakness and giddiness if the head was raised; the pulse was not more than 80. And the tongue clean. Monday was passed in the same manner, with the usual lochial discharge, and there was no complaint. She appeared as well in every respect on the following morning, Tuesday. The pulse was not more than eighty; the tongue clean; the skin cool; and there was no pain; there was a secretion in the breasts, and lochial discharge. As the bowels had not acted, it was thought right to give some castor oil. I saw her after it had acted twice, about 3 o'clock in the afternoon, when she said she was comfortable.

In the evening, at 9 o'clock, I saw her again, she had had violent shivering, and was very hot; there was beating in the head, and violent pain in the abdomen, with considerable tenderness; her pulse was 120, and her tongue much furred. Upon a slight view of this case, I should certainly have thought it one of peritonitis, and requiring bloodletting; but upon attentively considering its history, and comparing it with some of doctor Marshall Hall's, I made up my mind, that, whatever analogy there seemed to be between its symptoms and those of peritonitis, it

was not inflammation. An opiate was given. In the morning, I heard my patient had slept occasionally; the tongue was becoming clean at its edge; the pulse was not more than 90; there was less heat of the skin; and no pain in the abdomen, but the tenderness continued, although in a less degree. A cold lotion was applied to the head, for there still was throbbing. In the evening my patient was still better, the tongue was cleaner, and there was less throbbing, and less tenderness. A little solid food was allowed, and the next day she appeared in all respects tolerably well. I have given this case much in detail, because it involves more practical points than the one it is intended chiefly to illustrate.

"I conclude this communication by the subjoined letter from a friend, whom I asked whether he had met cases similar to those which I have detailed.

"*Highgate, May* 18, 1831.—Dear Sir—In compliance with your wish, I have sent a short sketch of two cases which have occurred during the last 12 months in my practice. I have to regret not being able to furnish you with more ample details, not having made any particular notes at the time of their occurrence.

"A. D., of a spare habit, about thirty years of age; was delivered by me of her second child, January 29, 1831, after a natural labor of ten hours duration. The placenta was detached half an hour afterwards, during the contraction of the uterus.—Having administered an opiate, left her shortly afterwards going on well—the uterus contracted, the pulse steady, and not more discharge than usual. I was, however, hastily summoned in two hours, and on my arrival found her in a very weak state, with a pale and anxious countenance, low pulse, and great restlessness, complaining of much pain in the lower part of the abdomen, with a sensation of weight; in fact, she had the symptoms which indicated a great loss of blood. On examining the abdomen, the uterus was well contracted; but, on passing the hand into the vagina, (which was done very easily,) I found it considerably distended with clots of blood, which I instantly removed.—The os uteri was nearly closed. The removal of the coagula produced immediate relief, the pain ceased, and having given her some brandy, and, as soon as it could be procured, beef tea at short intervals, she rallied greatly before I left her. On looking over the clothes and napkins which received the discharge during and after labor, I discovered that there had been very much discharged externally. The clots on being placed together, were about the size of a child's head at the time of birth.

"The second case presented very little variety from the first, excepting that I was called five hours after the delivery. The uterus was contracted as in the former case. The same treat-

ment was adopted with similar benefit. The woman, however, was not so debilitated, being of a more robust habit. Both cases have done extremely well. Yours sincerely,

N. T. WETHERELL."

Our readers will readily admit, that, every thing which promises to lessen the dangers and sufferings attendant on the parturent condition of women, is pre eminently entitled to our notice. Under this impression, we have selected the foregoing observations of doctor Heming, believing that such cases have passed through our own hands, and that the occurrence is by no means uncommon.

Those who are sensible of the dangers attendant upon such an occurrence, after the patient shall have been much reduced, will best see the importanee of constantly bearing in mind, the necessity of watching; and, wherever there is doubt, making examination per vaginam.

Our author, as it is but too common with medical writers, speaks too arbitrarily of this form of hemorrhage. Such positive distinction is calculated to deceive, for we are well persuaded, in the present case, that instead of viewing the uterine hemorrhages as three distinct forms of disease, they should be considered as in some degree blended; nay, sometimes dependent upon each other, at least, we believe, it will be found thatin many cases of the form of hemorrhage before us, it will have been preceded by the "*external*" hemorrhage. A gradual escape of blood from the uterus will be likely to lead to the coagulation of the blood within the vagina, and a sort of obstruction to the further escape of blood will give rise to the formation of a very great mass of it—and, indeed, we can see nothing new in the case suggested, by our author, other than the wholesome caution which it presents to our view, by showing us that under certain circumstances, the blood escaping from the uterus may escape per os externum, or be retained and thus conceal the hemorrhage, and the danger until it may often be too late.—Whether this state of things will mostly arise from a more gradual escape of blood, or under what particular circumstances such accumulation of coagulated blood takes place, I shall not attempt to explain—it is mainly important to know, that the escape of blood from the womb to a dangerous and even fatal amount, may take place while there is little or no escape of blood externally. Let the accoucheur be cautious then, never to leave his patient until he is satisfied no risk of hemorrhage exists.

ART. VI. *Case of Strangulated Hernia, attended with some peculiarities.* By HORATIO G. JAMESON, M.D.

WE have long been of the opinion that, the science of medicine would have been improved, in all its widest range, by faithful reports of unfortunate cases, since these are suited, in various ways, to throw light in our path towards the Æsculapian Temple.

I was called to the case of a black woman, named Jenny, in the month of April, 1825; and from my note book I copy the following account of the case. "This case has been attended and referred by doctor Fisher. The patient began to complain about Christmas of severe griping pains; constipation, succeeded by soreness about the upper aperture of the inguinal canal. From these symptoms she has suffered much more sometimes than at others—of late she is generally confined to bed, and she has no alvine evacuations, except from strong purgatives. At present, she is extremely ill, much prostrated, with great tenderness about the *ring*. Dr. Fisher has sometime since discovered a small tumor about the upper ring, but owing to the woman's having been long diseased, he could scarcely bring himself to believe that there could be any thing in form of a *strangulation*.

Upon examination, I found a small tumor at the upper ring, very sore; and when pressed on, the pain extended up to the stomach. She had been much plagued for some days with flatus and eructations—one could also, upon a more careful examination, feel several other tumors, about the size of a prune, above and below the *ring*, towards the pubis.

"I made an incision in the usual course for inguinal hernia, and found the tumor at the upper *ring;* and it could be plainly felt rising up into the abdomen, and of course above the ring, so that it became necessary to carry the incision through the lower edge of the internal oblique muscle. Having opened the fascia transversalis, a tumor appeared, having so much the appearance of an inflamed intestine, that we were all of the opinion for a moment or two, that it was a portion of a strangulated intestine; but we soon ascertained it to be a portion of omentum, covered by the peritoneum much thickened. This being, then, a portion of the omentum, which was obviously strangulated, by a contraction of the upper part of the sack, I divided the sack freely, and thus loosened a considerable portion of omentum, which was rolled up, and its vessels greatly turgid with blood—and there were considerable adhesions among its several folds, which state of things appeared to have arisen from the pressure upon the omentum thus confined. Upon opening the sack a considerable quantity of watery fluid escaped.

"Other tumors were now felt above and below the *ring*—having opened the peritoneum, I availed myself of the opportunity and drew out a portion of intestine, which appeared to be a portion of the colon. But I now ascertained that the tumors which had been felt, were formed by hardened feces; it was impacted in different parts of the colon, and upper part of the rectum—by gentle pressure, applied by means of the thumb and forefinger, I succeeded in dividing these balls of feces into small parts, and distributed them along the intestine. This was done in so cautious a manner as to do no injury to the tender bowels. The bowel was now replaced, and two sutures having been inserted into the external wound, taking care not to take in the peritoneum nor the tendinous portion of the muscle. The patient was much exhausted, though she bore the operation with great fortitude. A large anodyne was given; which was to be repeated in smaller doses pro re nata. Warm water was injected into the rectum, with a view of softening the hardened feces. I was assisted by my friends doctors Fisher, and Annan, and my son.

April 6, (day after the operation,) "Jenny had had rather a better night than usual for some time past, the bowels have not been open, pulse feeble, no tension of the abdomen. Directed to use purgative injections of salts, lard, &c. every hour till the bowels are opened. Evening, has taken four injections, which remain. She had taken two doses of castor oil yesterday which operated. There was retention of urine in the night, which has been relieved by the tea of water-melon seed—advised continuance of the injections, and if they do not operate soon, use a suppository.

"7th—Jenny has had a bad night—stomach rejected every thing, bowels still not open—nine or ten injections have been given and retained. Took three calomel pills of 10 grs. each—and used suppositories of tobacco. Evening, pulse very feeble and irregular, stomach will not retain drink. Advised a small injection made very strong of salt; this instantly oocasioned a tolerable stool. I had, previous to the exhibition of the enema, passed a small scoop about nine inches up the rectum, and by turning it gently round, I broke down balls of feces. A second enema of strong salt water occasioned two tolerable stools. Advised small quantities of wine whey—take a pill of calomel, (5 grs.) with ½ gr. opium every hour or two. She is extremely prostrated and the pulse nearly extinct, but there is no soreness of the abdomen.

"8th.—Jenny has had another restless night, no more passages, skin quite cold, stomach rejects every thing, not excepting a

little drink—pulse nearly extinct, and there is no longer any hope of recovery.

"9th—Jenny died yesterday soon after I saw her. We obtained permission to examine the body, and in presence of doctors Fisher, and Annan, I made the examination. That part of the omentum which had been strangulated was much inflamed; and, considerable attachments were formed to the surrounding parts. The intestines were natural, and the scybala, which have been mentioned as existing at the time of the operation, had been removed by the enemata, at least in greater part. The cause of all her sufferings, and her death, was found to be owing principally, if not entirely, to a tumor of a scirrhous character attached to the mesentery, which was so situated as to obstruct the colon. This tumor, obviously of a malignant aspect, was, I think, a species of fungous hematodes. It would seem that the tumor caused an obstruction, and this causing a great deal of straining, a portion of the omentum had been forced down into the situation, mentioned in the recital of the operation."

ART. VII. *Case of Empyema, successfully treated.* By doctor WOLFLY, *of Lancaster, Ohio.*

June 12th, 1829.—I was called to see W. W. in consultation with doctor M. He had been attacked about six weeks previous with pleurisy, as was supposed; being from home, he had medical advice, and attendance, of which I know nothing; but, I should rather suppose the case was not treated with that energy and decision that it has since seemed to require. He, however, recovered so much as to return home with a good deal of difficulty—and continued under the care of the above doctor M. until I was called into council. As well as I could learn, he had been treated with a view to a slight affection of the liver.

My own opinion of the case at this time was, that his first attack was an acute inflammation of the spleen, which had extended by contiguous sympathy to the pleura, and lungs. He had the following symptoms—cough with little expectoration—pain in the left breast, sometimes acute—some oppression and difficulty of breathing—pulse full, soft, and frequent, with considerable fever—exacerbations morning and evening—night sweats, and diarrhea.

June 14.—The symptoms nearly the same, except his pulse, which was harder and more contracted, and a very acute pain in the left breast, which impeded respiration. Although he was very much reduced in strength, and his diarrhea, &c. continued,

still there appeared to be no alternative but letting of blood, which was accordingly hazarded. It afforded instant relief from the severe pain and difficulty of breathing. This afternoon, from a closer examination into the case, I became strongly impressed with the opinion that, there was a collection of matter within the left pleura. My opinion was formed from the following symptoms—difficulty of breathing, inability to lie on the right side, owing to a sense of suffocation; the heart was crowded from its proper situation, and was found beating violently in the right breast. Hectic fever and diarrhea continued—the left side was full, and the skin edematous—respiration appeared to be carried on entirely by the right lobe of the lungs. I expressed my opinion to the doctor, and wished him to examine the case, to ascertain whether pus had collected. He could not think it to be the case, because the difficulty of breathing and cough were not as violent as he would have supposed, to indicate Empyema; and there had been no shake or chill preceding the formation of matter. This being the situation of our opinions, a third physician was called into consultation, (June 15th,) who was rather of the opinion that matter had been formed in the chest.

June 16.—At another consultation with the above physicians, the operation of paracentesis was determined on—it was accordingly performed in the afternoon. Matter was discharged to the amount of 26 oz. of a very offensive and vitiated quality, and accompanied with a very offensive gas. It was supposed that the pus was not all discharged.

Directed continuance of a tonic infusion; and an occasional opiate, to keep the diarrhea in check. Immediately after the operation, the patient felt relieved from the tension, and weight in the chest, which he before had compared to that of a large man standing on his breast—the heart could be felt, though less distinctly, on the right, but it beats behind the sternum.

June 17.—The discharge by the opening about 5 oz. The hectic symptoms diminished. Pulse this morning about 80. Skin cool, respiration easier, there is but little diarrhea. Afternoon, increase of fever; pulse 100, full and compressible, considerable stupor and delirium; complains of a good deal of soreness of the left breast, bowels bloated, countenance sunk; cough a little increased, but expectoration free. The sponge tent introduced in the morning had to be removed this afternoon, on account of the irritation; a considerable discharge of pus; supposed to be from a distinct sack having given way, higher up in the chest than where the pus had previously been given out. Dovers powder was given every four hours, on account of fever; neither wine nor quinine could be given.

June 18.—Pus diminished in quantity, but still very offensive; pulse 100; skin dry and hot; stupor; diarrhea, and bowels bloated; some cough; perceptible heaving of the left breast. Evening; wound made in tapping has a gangrenous appearance; there is a considerable discharge of pus from the wound, occasioned by a fit of coughing, which discharge was supposed to be from a distinct sack; the left breast heaves a little more distinctly. The symptoms generally indicative of gangrene; the case appears almost hopeless. Directed wine, quinine, and E. vitriol, to be administered *freely*—a Dovers powder pro re nata.

June 19.—Patient rested well, fever not increased by the tonics, through the night—this morning fever less, pulse 90, and more contracted—very little soreness of the breast; the wound appears redder and more healthy; stupor less; cough easy; matter from the side more healthy; the left lung seems to have more play, no diarrhea during the night; took some nourishment.—Continued wine and quinine, 7 grs. every hour, and E. vitriol. 12 o'clock—Fever increased; wine and quinine discontinued—there was a discharge of 1 ℔. of matter, after which his pulse sunk, and became small, at 3 o'clock; began tonics again at 9 o'clock at night; pulse 100; some cough; skin moist; diarrhea troublesome; some appetite; heart returning to the left side—continued tonics.

June 20.—Last night rested comfortably; a little fever this morning; discharged about 1 ℔. of matter; rested well to-day; took nourishment very well; also took wine, quinine, and A. sulph. This evening, exhaustion extreme—additional treatment, Pulv. Kino; bowels, heretofore bloated, have now become natural.

June 21.—Pulse 90; discharge 12 oz.; diarrhea slight; strength exhausted; appetite less; great oppression at the breast, last night: changed the tonics; now uses Colombo and Tinct. of Iron. This evening, strength recruited; fever increased; inclined to sleep; rested well.

June 22.—Colombo discontinued, disagrees with stomach; pulse 95, full, feverish heat of body; bowels bloated; discharge 4 oz. Fever too high for tonics; spirits of nitre was used; discharge this evening 5 oz.; pulse 90.

June 23.—Rested well last night; commence tonics; no fever; pulse 85; discharge 4 oz.; strength improving; appetite good. Evening, fever slight; discharge small.

June 24th.—Discharge 5 oz.; pulse 90; appetite good; some diarrhea; strength improving; cough less—continue tonics.

25th.—Discharge the same; pulse the same; the appearance of the pus thicker, and healthier in its appearance; appetite continues good; diarrhea less; rests well.

26th.—Appetite good; pulse 85; discharge less; diarrhea less; no swelling of the bowels; no soreness of the side.

27th.—Symptoms the same as yesterday.

28th.—Fever increased; and diarrhea; and discharge.

29th.—Discharge the same; fever less.

30th.—In statu quo.

July 1, 2, and 3.—In statu quo.

4th.—Discharge small, and serous.

5th.—Instead of pus, the discharge has assumed the appearance of the natural exhalation of the pleura; no fever; appetite good; strength recruiting.

6th and 7th.—Rides out a little; appetite good; bowels regular; no pain or fever; discharge small and serous.

8th and 9th.—Still improving; pulse slow and natural; bowels regular; no cough; the heart has assumed its natural position.

From this time the case was not under my immediate notice, but I was informed that the recovery of the patient was slow. He had in a few weeks become able to walk out, when one day, on attempting to climb over a fence, he fell and hurt his breast. He soon became worse, and on the next day there was a discharge of bloody serum from the cavity of the chest—the incision still remaining open. This discharge gradually changed in appearance, and diminished to a small quantity of serum. The opening soon closed, when, he was shortly after attacked with cough. It became more violent; from being dry and hollow at first, it was soon attended with expectoration of pus. It appeared as though a vomica had formed in the lung, and found an exit through the bronchia. He now labored under every appearance of a person in the last stage of phthisis. He was stoop shouldered, very much emaciated; had cough and purulent expectoration, and was completely hectic. From all these symptoms he gradually recovered, and is now, and has been for two years past, in the enjoyment of good health.

Remarks.—I think the above case interesting, as it shews us that recovery may take place even after such extensive disease of so important an organ in the animal machine as the lungs. That the recovery may be *complete*, and the lung, which at one time in the course of the disease was collapsed and quiescent, may again be distended, so as to fill its proper situation and perform its accustomed functions. It may also be worthy of notice, that the pleura and lung did not unite by adhesive inflammation, as would be expected after suppuration, but that the natural secretion of serum was again restored.

It is also interesting, practically considered. Here we have a case in which we find an absolute necessity for an entire change of treatment in the course of 24 hours. What it is that

supervenes in a case, where we know the pathological condition, under ordinary circumstances, requires an antiphlogistic treatment, so as to require the active administration of tonics and stimulants to keep the system from sinking. What it is, is more than I am able to say, but of the absolute necessity of such change I am well convinced.* It does appear strange, and I do not remember having seen this fact noticed by any writer that I have read. But that such may be, and has been the case, I have not the least doubt. I would feel reluctant to speak so confidently on this subject, were it not that I have on other occasions and in other diseases noticed the same fact. I recollect one case particularly that occurred in my practice a few years ago. It was at a time when what is called pneumonia typhoides or cold plague was endemic. In one of these cases, from having made use of the most diffusible stimulous, the treatment had to be changed entirely, and resort to the *lancet* became necessary. This case made a strong and lasting impression on my mind. I think it one of great interest, and may at some future time give it in detail to the public. Many physicians are too apt to pursue the same course of treatment throughout the different stages of a disease.†

In conclusion, I would add, that in this case we also have corroborative evidence of the singular fact, that a predisposition to disease in a particular organ, may be, and often is, overcome by disease of the containing or neighboring parts. This individual was naturally predisposed to pulmonary disease, but is now not only healthier, but this predisposition appears to be lessened.

From Hennen's excellent work on Military Surgery, I make the following extract:—"It may be observed generally of the organs contained in the different cavities, that after any serious wound, their disposition to disease is very much increased; and causes which in a state of health would have had scarcely any effect upon them, operate very powerfully. In the head, the

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*I would not wish to be understood as meaning that state of depression that often precedes the state of excitement in fevers, &c. but a something entirely different. I know something of the kind has been noticed from atmospheric changes and change of location. We also find a similar effect often produced by a removal of sick from crowded and ill ventilated apartments to places more pure and better aired.

†We would remind our friend and correspondent, that our countryman, doctor Rush, has placed this varying condition of diseases on its proper footing—this indeed constitutes the most important part of his works.

tendency to congestion becomes so great, that phrenitis and mania follow any excitement from heat, exertion, violent emotion, and especially, excesses in drinking. In the abdomen, hernia, local pains darting around the affected part, irregularity of the bowels and the stomach, borborygmy, gastrodynia, &c. &c. follow its injuries. The lungs suffer severely in the lesions of the thorax, the slightest atmospherical changes affecting them powerfully; this consequence is almost invariable; *yet there have been remarkable instances where a naturally delicate, or even an actually diseased state of the lungs, has been bettered by a penetrating wound.* An instance of this kind has never come under my notice; although I have very respectable living authority to say, *that a strong predisposition to phthisis was suspended in one case, and spasmodic asthma relieved in another, by penetrating wounds of the thorax.* M. Larray mentions the *case of an officer cured of a well characterized phthisis by a wound which penetrated this cavity.*". Memoires, tom. iii. p. 376.

ART. VIII. *Case of Wound in the Groin, attended with puncture of the iliac vein, and terminating fatally. By* H. G. JAMESON, M. D.

WHITEFORD, aged —, was stabbed in the groin, in an affray where he was innocently endeavoring to part some boys who were fighting.

May 21st, 1832, I was requested to meet my friends doctors Dunan and Whitridge, for the purpose of examining the wound of Mr. Whiteford, with intention, that any operation which might be deemed necessary should be performed immediately.—From doctor Dunan, I had the following account of this young man. While engaged in the act of disengaging some boys in strife, he received a stab in the upper part of the thigh or groin, which had been done so slily that, no one present saw the deed done, nor had he any positive knowledge of the person by whom it was done, although it was just at night fall.

The wound bled a good deal at the time, but not to such extent as to give rise to much apprehension of an artery or great vessel being wounded. Superficial dressings were applied; the patient was subjected to an antiphlogistic plan of treatment, and remained in bed.—Several days afterwards he was so well that his physician permitted him to set up a little. But some days ago it bled a little, and yesterday it bled considerably; patient thinks half a pint, and the further flow was prevented by compression, which was applied by doctor Dunan.

This evening, 4 o'clock, I find a round wound with contused livid edges, very much resembling the wound of a pistol ball, situated just below the edge of Poupart's ligament, and passing obliquely upwards and inwards. Originally the wound had the appearance of a stab, as I am informed by Dr. D. The young man, innocently enough, stated that a person had called who could staunch blood by means of the Bible, provided only that he knew the patient's name, that the experiment had been tried this morning, (after doctor D. had made pressure,) and it had not bled since; but while he spoke to me, the wound began to bleed; moderately however. Whether he had much confidence in this silly thing I know not, but what he had he lost upon seeing it bleed; and willingly consented that we should do for him whatever we deemed proper.

The bandages being removed the blood poured out in a torrent, and was quite florid—it became necessary to plug the wound immediately by means of a finger. The patient being properly placed, on the bed where he lay, for the operation, doctor Dunan kept the blood from flowing, by stopping the wound with his finger.

The hypogastrium on the affected side, was considerably distended, very sore to the touch, somewhat ecchymosed, and apparently as hard inwardly as a board—with this state of the parts, I expressed to the gentlemen present my opinion that, I had great misgivings as to the result of the operation, that I was somewhat apprehensive, that when the abdomen was opened, the blood might escape by the wound I was about to make; but, that, at all events, we must expect to find considerable difficulty in getting at the wounded vessel, from the fact of the parts being so much injected, and thereby made solid—That I believed there was no alternative, the operation might possibly be useful; without it he must certainly die. To this opinion, thus summarily expressed, my friends assented, and we proceeded to the operation of tying the iliac artery, as there seemed to be little doubt of this vessel or the vein being punctured, and the fresh blood being mixed with the old, presented a difficulty.

I commenced by making an incision in the usual situation, running parallel with the fibres of the external oblique muscle. I soon perceived that there was great increased vascular action in the parts, and general adhesion of them. The cut edges had a yellowish color with a very slight tinge of brown, the blood which escaped very freely, was dark thin, and loosely mixed with a portion of yellowish lymph; every structure felt hard under the knife, and no one part could be easily distinguished from others. The cellular membrane lining or covering the peritoneum, was greatly thickened, and so identified with the peri-

toneum that, they could not be distinguished; and that portion of the cellular membrane which lies at the bottom of the peritoneal sack, under and a little above Poupart's ligament, was thickened to the extent of nearly an inch.

The abdominal walls having been divided by a cautious procedure, the necessity for which grew out of the fact of the general attachments, and the unusual amount of discharge of blood from the small vessels, I found that such was the unyielding condition of the parts, that, the wound could not be separated so as to enable me to get a view of the iliac artery; and I was much surprised, and no little perplexed, to find that no pulsation could be distinguished, nor could the artery be discovered by the touch, owing to the rigid and greatly thickened condition of the cellular membrane, wherever it existed, and of course this involved the sheath of the artery and vein.

With a view to obviate this difficulty, I made an incision at right angles with the first upwards, and of course across near the end of the false ribs. By carrying my finger further up in the course of the iliac artery, I discovered what I supposed to be the artery; but, four inches above Poupart's ligament there was not the slightest pulsation; and the artery was so reduced in size, that I could not feel certain of its being the artery, nor were the gentlemen present satisfied of it; and yet it could not be any thing else, usually found.

Here I changed my plan for the present, and proceeded to lay open the wound below Poupart's ligament, and having extended it a little down the thigh, I easily exposed the femoral artery, just below the ligament; and applied a ligature without disturbing the artery in its bed. We now found that although there was no pulsation whatever above the ligament, immediately below it, the artery beat freely, and in a fretted hurried manner.—Passing a finger in the course of the wound, it was found to have entered just over the great vein and just under Poupart's ligament, and went to the depth of two inches or more, obliquely upwards, inwards, and backwards, that is, it inclined from the point of the vein directly, at the lower edge of Poupart's ligament towards the internal iliac artery. In this course, it crossed the epigastric artery on its outside. Owing to the injected and dense state of the textures, nothing could be accurately distinguished; but it was to be presumed that, the epigastric might have been wounded, or the iliac vein; and, not knowing on which side the edge of the knife penetrated, there could be no certainty of the nature of the wound; and so great was the escape of dark blood, from all the cut surfaces, that much obscurity was thrown over the case.

Having tied the artery just below Poupart's ligament, I now passed a ligature around the external iliac, about two inches above the ligament, and endeavored by pulling at this to decide, whether the reduced, and small dull cord was really the artery, for in it was no pulsation whatever, and even rolling the cord-like structure, between the thumb and finger, still left some room for doubt, but attempting to give motion to the artery when tied below, by pulling above, I found it perfectly immovable, in consequence of the strong attachments of all the parts adjacent.—Determined to leave no doubt, I detached the artery under the ligament, but without cutting the latter, and then, by pulling above, we readily ascertained that, we had hold of the iliac artery greatly diseased.

The wounds were now drawn together, by means of sutures and adhesive plasters. A considerable oozing of blood continued, but nothing indicated the opened state of any great vessel, or rather, if any was still open, it was shut by coagulum, or but slightly wounded; but I had removed all the coagulum external to the vessels.

This was one of the most difficult and perplexing operations that I ever performed, the patient was more or less under the operation considerably above an hour—much time was lost, however, in wiping away the blood, and waiting for an abatement of its discharge. The patient complained bitterly, but held still, and bore the operation, so far as we could judge from the countenance and the pulse, better than could have been expected.

Remarks.—I had anticipated that as the hypogastrium was much swelled, very hard and felt as if filled with coagula, and extremely sore to the touch, that much difficulty and uncertainty attended the operation, but I felt it my duty to make an effort to save life. The most perplexing, and, indeed, inexplicable circumstance was that of the wasted, discolored, and empty condition of the iliac artery. I cannot in any way account for this occurrence at present, except we may ascribe it to a very great degree of pressure which must have been made under, and above Poupart's ligament, by the thickened and hardened state of the cellular membrane—we have already said, that it was hard and nearly an inch thick.

Was the iliac vein wounded? it might be to a more or less extent: a moderate wound of it, it may be presumed, might heal, and leave the vessel pervious—the chances we had reason to believe would be much increased, by lessening the circulation through the limb, hence the advantage of tying the iliac or femoral artery. But finding the iliac artery bloodless and inactive, no advantage could arise from tying it with a view to lessen the force of circulation on the wounded vein. From the great in-

crease of circulation in the part, it was to be apprehended that the circumflex iliac, the epigastric, (if not wounded,) and the external pudic, &c., would supply the leg with blood; and, this was the more certain from the fact, that notwithstanding the absence of circulation through the external iliac artery, the leg was not cold, nor did the patient complain of numbness. On this view of the subject, it was that I thought it advisable to tie the artery below Poupart's ligament.

I have already intimated that from the situation of the wound, the epigastric might be wounded; and there was no positive certainty that the artery might not have been wounded within Poupart's ligament; such being the case, I thought best to tie the external iliac, as it now lay exposed to view. A portion of intestine was seen in the wound, the lower end, I presume, of the colon, it was somewhat inflamed.

Having now, as I supposed, done all in our power for our patient, we proceeded to dress, and left him better than could have been expected, but with a moderate oozing of blood from the wound we had made.

Morning after the operation, at 9 o'clock—Understand that the patient has passed a tolerable night, although no opium has been given, except a pretty large portion of laudanum just before the operation. His pulse is not remarkably feeble, nor remarkably frequent, though partaking of both these states: his countenance is good; the hypogastrium less swelled, and less painful than yesterday; no soreness or pressure over the abdomen, but the abdomen seems a good deal inflated; passes urine well, stomach but moderately irritable; has been somewhat nauseated, but not to any great extent. There has been a moderate oozing through the upper wound, which continues moderately—the affected leg is slightly benumbed to the knees, below he says it feels natural, and comfortable; the foot a little cool to my touch; the temperature of the whole leg natural. Advised a warm brick to the foot, and to continue the blanket to the leg, which has been there during the night. One gr. of opium once in 3 hours.

Evening—Patient has passed a tolerable day, countenance good, abdomen neither more swelled nor painful to pressure.—Blood still weeps from the wound pretty freely, the pulse less frequent and more full; epigastrium less tense, the leg feels natural and free from uneasiness; the numbness, which existed in the morning, has gone off. We advised the conditional use of opium, and enemas, to open his bowels, which have not been relieved since the day before yesterday.

Second day after the operation—Our patient has had a pretty bad night, slept but little; pretty severe nausea; had some hiccup, in the evening—his attendants differed with respect to his bowels being open or not. There is general fever, greater fullness of the abdomen, the affected foot hot to the touch; and it feels hot to himself; still a good deal of oozing, but not sufficient to affect his strength for the present. We directed 5 gr. doses of calomel every hour, till three doses are given; and to be followed, if necessary, by an enema. Took a little milk, which sickened him—use nothing but toast water in spoonfuls.

Evening—Has had a tolerable day, has not vomited, his bowels have been pretty well opened, but there is still very considerable distension, though but little soreness, except about the wound, where it has not increased since yesterday. There is still a good deal of oozing, but less than yesterday. Leg feels as well he says as the well one, but to the touch it is a little warmer than natural. When he talks, there is some labor in breathing. Dressed the wound, and he is to use the anodyne conditionally—take no food or drink except the toast-water in very small quantities.

Third day after the operation—Has rested pretty well, but has not slept; some hiccup, abdomen considerably softer, and there have been free passages; countenance somewhat improved, respiration pretty easy; leg quite easy, and a little warmer than natural. Advised 15 grs. of calomel, in two pills, and enemas, if necessary—nothing allowed for drink except toast water; pulse 108, tongue pretty clean. Evening—Pulse 90, abdomen softer, there has been less oozing of blood to-day; last night a thick rag laid over the wound was wetted through with blood—Dressed with adhesive plasters; take a grain of opium every hour till sleep ensues.

Fourth day after the operation—The patient took four opium pills last night, and slept well—countenance better, abdomen softer, particularly about the wound, from which there now weeps a thick serum slightly tinged with dark blood; leg natural, and comfortable to the patient; stomach quiet; bowels freely opened yesterday evening, after the use of an injection. Pulse 80, tongue clean, countenance good, leg feels comfortable. Adhere to the toast-water, and take the calomel with a view to act on the bowels—Dressed the wound, which looks well.

Fifth morning after the operation—Arriving at the house of our patient, I found a jury of inquest sitting, and was required, together with my professional friends, to give testimony. I understood from my friend doctor Dunan that, our patient continued much as we left him during the day. Took his pills, which opened his bowels; at a late hour of the night doctors Whit-

ridge and Dunan were called on, and visiting the patient, they found him greatly prostrated and evidently dying—at this time, the hemorrhage which had taken place, a little before, had ceased. He died soon after they left him.

Dissection.—We opened the abdomen and found the bottom of the peritoneal sack and adjacent membranes in a state of sphaculation—not being able to ascertain the precise situation of the iliac artery or vein, we proceeded to dissect out a portion of the adjacent structures, with about two and a half inches of the vessels, making the lower divisions at the edge of Poupart's ligament, and a little above the diseased portion of the envelope of the vessels. Splitting the vein open, we found a small punctured wound in the iliac vein, about two inches above Poupart's ligament, of a size sufficient easily to admit a common writing quill. There was no fresh blood in the abdomen—on the contrary, such was the closeness of the several parts to each other, that the blood escaped from the wound as fast as it flowed from the wounded vessel.

Some scruples on the part of his country friends, about the dissection, prevented us from preceding further; otherwise, I am confident we should have found the veins of the leg containing diseased blood; at all events, it was obvious in the operation upon this patient, that the textures were more diseased than usual, and contained much darkish blood mixed with yellowish serum. All the medical gentlemen present ascribed the death of the patient to a wound of the iliac vein—but that he died of gangrene, as a consequence of the wound.

ART. IX. *Physiologisch-chirurgische Beobachtungen bie Cholerakranken. Von Dr. J. F. Diffenbach, &c. &c., Berlin,* 1832.

Physiolo-chirurgical Observations upon Cholera-patients. By Dr. J. F. Diffenbach, &c. &c., Berlin, 1832.

A PAMPHLET, bearing the above title, has recently been forwarded to us, by our respected and talented friend, at Berlin, in Prussia. We trust our readers will consider the contents interesting at the present moment, while we have fears of the appearance of Cholera.

One is astonished (says our author,) to find that, upon cutting into the skin with a surgical intention, in a cold, blueish, pulseless, Cholera-patient, no blood escapes, and the wound is as cold as ice; and all the circumstances attendant resemble an incision

upon a dead body. The sharpest knife moves along through the skin with difficulty, in the youngest persons full of blood; the skin is so contracted and tough as to feel like that of an old woman. Indeed, an incision can be made with more facility in a dead body than in a pulseless Cholera-patient. An incision is readily made in the living skin well filled with blood, and made firm by its living economy; and hence it is that, an operation can be more readily and handsomely made on the living body than on the dead.

What appears remarkable here, is the fact, that, when we make an incision in the skin of a Cholera-patient is this: the knife, owing to the toughness of the skin, passes through it with difficulty, particularly if made without much freedom of hand.

If we hold the skin in a fold and cut through it with the knife, the incision will be made more or less easily in proportion as the fold is made more tense. We would call the attention of the reflecting observer to the fact, that the edges of a wound separate but little, while the skin shows no disposition to retract.—If we separate the lips of the wound they remain as we place them, and if we shut them again, the wound appears to be completely shut up.

If we separate the wound, by pressing apart the skin, and the cellular member, so as to expose the layers of membrane, and muscles, and observe the bellies of the muscles, the large vessels, and the venous cords, we may observe the following phenomena:

We first perceive that the wound does not bleed at all, that the (*corium*) skin is bloodless, and does not present, upon an incision being made, the ordinary slight redness, but mostly a cinnabar-yellow (menniggelb). If the part wounded was in a livid state, the sides of the wound appear a blueish-brown—if we wipe off the wound with a sponge, we observe that this coloring, from the division of the capillaries, brings forth a little treacle-like blood; but a portion of this fluid remains behind, and cannot be pressed out. In such cases, the surface of the wound is somewhat darker than where the skin is white. The fatty portion of the skin is of a glossy yellowish color; under the skin of young healthy persons, it looks as if it were weakened, is tough, and less yellow, and in general it is very dry.

The most remarkable change, however, is seen in the cellular membrane which binds together the muscles; it is generally rigid, dry, and clear like a leaf of isinglass. The division of it presents the same transparency as that of the skin of cold-blooded animals, as the frog, turtle, &c. If we stretch it tightly, we can see through it. The aponeurotic membranes, the ten-

dons, and cartilages, appear white; but they have less of the usual silvery-appearance, they are much softer, and withered.

The muscles are not paler than common; I should say they are rather browner and darker; their sensibility is less excited by mechanical irritation, in a remarkable degree; any disturbance by art discovers but little delicate sensation. The larger nerves are also altered in their appearance, they are much paler than generally observed in surgical operations, and feel softer. The irritibility of the nerves of the skin is not altered, since the division of the skin of a Cholera-patient is attended with as violent pain as that of healthy persons; at any rate, the otherwise torpid substance, when cut, gives rise to very violent pain. If we disturb a nerve by means of an instrument, or pinch it with the forceps, we occasion very severe pain; and if it goes to some particular muscle, the muscle is made to exhibit convulsive movements, as is usual upon applying such violence, as may sometimes be seen in surgical operations.

The principal circumstances of the subject under notice, are those connected with the vessels. The wound never bleeds, and, upon cutting, the cellular membrane looks as if it had been washed, or rather like an anatomical preparation of the eye.—But little lymph can be squeezed from the edges of the wound; every thing looks dry. If we wipe off the surface, it is long before it becomes moist again. It is but seldom that one sees a portion of tar-like blood escaping from wounds of some extent in the skin, which involved some of the larger veins of the skin; and the blood is so thick that it does not flow over the whole wound. By pressure, this dark blood may be made to come out of the vessels. The small vessels contain but little blood, and, this viscous blood cannot be made to flow from the veins where we wish to draw blood.

There is a great resemblance in the appearance of the veins, and those of slaughtered animals—one may distinguish the dark thickish contents through their coats. We do not find in them the usual equal distribution of the blood, but we observe an inequality in parts closely adjacent, some being filled with very thick, and others with very thin blood. Where there is turgidness, it does not seem to be owing to increased force in the circulation; the vessels seem to have lost the power of reaction, and appear to be dead. If we apply a finger to a turgid vessel, the blood readily yields under the pressure, both ways, in the vessel.

In the large veins, such as the vena axillaris, in muscular men, the shrinking up of the vessels is, to be sure, not quite so considerable, but I have several times seen the jugular vein empty,

and with the size and appearance of a string of twine. By stroking along a vein with a finger and moderate pressure, the vein may be entirely emptied, not only in the direction to the heart, but towards the periphery. If we let it remain still, it does not soon fill, but, if we squeeze the limb, or press upon the muscles, the emptied vessel fills again, as well from the *cardiac* side, as from the *dictal*.

We find none but the larger veins turgid with tar-like blood, such as the axillary, jugulars, &c.; those of middle size, as the brachialis, basilica, cephalic, and others, are generally empty, and there is associated with this, stagnation in the capillary vessels of the skin. In this, the friend to the belief of obstruction of the fluids, sees the very obstruction itself. It is particularly remarkable that, at times the external jugulars are reduced in size, and very empty, while the arteries, to the touch, indicate their full activity. These veins do not fill upon pressure being applied near the clavicle, and, therefore, they cannot be the medium through which the blood returns from the head. At times the middle sized veins contain a considerable abundance of blackish blood which does not move in them, but is formed into long coagula. This is sometimes observed in the subcutaneous veins, and may be distinguished through the skin. The ordinary amount of blood circulated by such veins may be about one-fourth the usual quantity in the healthy condition—if these veins be laid bare, their sides do not lie down flat, the vessel remains round, and resembles a dark small cord. This smallness of the coats of the vessels, is not however, owing to a living contraction, but depends upon the peculiar condition of the blood, which is formed into round cord-like coagula.

At times the vessel appears alternately to be entirely empty, and like a thread, and again to be filled; but very often it is quite empty.

No mechanical means can be made to push on the blood in a vein which has been laid bare; rubbing, warming, and working of the whole limb may propel the mass, but it is not by a living action, but the propulsion is entirely mechanical.

If we find a large vein distended, and make attempts to expel the blood, by straight long incisions, and find that the blood will not flow freely, it is not on account of the thickness of the blood, nor want of power in the vein, but particularly to the want of force in the arteries.

Since it is by the arterial circulation, that the heart is made to press forward the venous circulation, is it not possible that this fails in the disease before us—if we, with Bichat, Broussais, and others, ascribe the circulating function to the capillary system, we shall find it in the present case, entirely suspend-

ed. But we are reminded of the very interesting experiment of Magendie, who included the whole of the leg of a dog, except the principal artery, and principal vein; on the latter vessel he applied a particular ligature, and opened the vein near the ligature, on the distal side. The blood began to flow freely while the artery acted, but upon closing the artery by pressure, the blood immediately began to flow slowly from the wound in the vein, till the artery was emptied, when it ceased altogether. Perhaps, says our author, if the nervous fluid had been suffered to pass the ligature, the circulation might have been revived.

The phenomena which we observed in the livid, cold, pulseless, Cholera subject, differ from all we know respecting life or assimilation. The appearance of a large bared artery of a Cholera-patient differs in several respects from what is commonly seen. Generally, if the arteries are not specially diseased, we see them in other diseases, (after death,) unaltered, as if they had performed their functions of life and sustentation. In ordinary circumstances we see an artery that has been laid bare, presenting the appearance of a white-reddish shining cord, possessed of elacitiey; here, on the contrary, we find it dull and lax, not because it is not filled with blood, but because its coats have lost their living turgidness or tension. It appears as if the artery had grown lean, and its coats loosened, and the vessel does not seem to be merely disturbed in its economy, but impaired in its conformation. This altered condition of the arterial coats attaches, in some degree, to all the structures, particularly in the membranous, the fibrous, and the cartilageous. Their vasa vaserum are not visible, not even through the lens—the whole vessel appears smaller in its calibre; and, owing to the wasting of its coats, it is, in fact, smaller than natural.

I have often found the brachial artery not larger than a thread, commonly used in tying up by apothecaries. It is only in stout men that we may expect to see it larger when we apply a ligature to a healthy artery, but little is to be seen of the artery since the rotundity of the artery, and the rising up of its sides, will bury the thread from both sides; here, on the contrary, the thread is mostly to be seen, since, owing to the softened state of the coats, they do not swell out and cover the thread.

In the cold, pulseless, Cholera-patient, at times there is a gentle pulsation, and one has the sensation as if a little wave of blood has passed in the vessel. The circumstance is very strange that the thick blood, which is present in the great vessels, cannot reach the extremities through the main vessel or its collateral branches, in an unbroken wave, partly because it is too thick, and partly because there is not sufficient force in the heart to propel it.

I have sought to explain the singular phenomenon, that, the coagulated blood is drawn into the heart, while the dying artery propels its contents, by its last living function partially.

From this thick blood in the heart's ventricles during life, are, certainly, formed polypous coagula, and the heart labors in vain to discharge its contents. Oftener there are formed coagula at the mouth of large vessels, and stops them up, or obstructs them, so as merely to permit a portion of the thinner part of the blood to pass; and since I see these coagula in the large arteries, I may safely conclude that they exist in the living heart also.

Certainly, small waves of blood were sometimes seen upon opening a large artery. I took particular notice, that, if the artery of the arm was opened, while there was a slight pulsation in it, there sometimes escaped a very thin blood; but, in a majority of cases, where the vessel was opened it ceased to pulsate. In one case of a violent blue, pulseless Cholera-patient, in the hospital of doctor Romberg, I performed the operation, of opening the axillary artery for a bloody inflammation, and immediately the blood flowed in a full stream.

The blood had a rose-red color, was thin and warm, and, at the same time, the patient was as cold as ice, and had a livid appearance. It flowed like blood out of a vein in an even curved stream. After I had drawn off 4 or 5 ounces, great debility ensued, while the emptying heart, by its action, was destroyed by its contractions—the patient soon after this died. The blood flowed very freely, and retained its red color.

Upon the more or less fluidity of the blood, and the power of the heart to propel it, depends the continuation of the action of the pulse. Sometimes a single propulsion of a wave of blood presents a slight or greater stretching of the artery, we feel sometimes here, now there, a single pulsation; now we feel it in the radial, now in the brachial, and again in the axillary, and there is a slight irregular thrill like a resonance from the feeble action of the heart. The arteries of the upper extremities are, in general, emptier than those of the lower. The latter I have, indeed, not opened in the living subject. But, when no pulsation could be perceived, I frequently saw in the dead subject, sometimes thin, sometimes thick blood.

In general the arteries in the dead subject contain blood, and yet during life they were empty. The carotids pulsate most distinctly, they do not, however, force the blood through the small vessels of the brain, otherwise the blood would return by the veins in greater quantity, and hence it is, that the patient is left with the blood coagulated in the brain.

May not the blood, after it is driven as far as it can be, be made to pass backwards, as we seen in some of the lower ani-

mals who possess retrograde vessels. The peculiar pulsation in the carotids gives the sensation of a pressure acting backwards upon the wave of blood. Where else is the blood to remain in the head, if the carotids continue to force it into the vessels, and the jugular veins do not bring it back again? and we have seen that, these veins are generally empty. A similar state of things seems to obtain in other organs, as the lungs, where, a circulation exists backwards and forwards, in the larger vessels. The respiration seems to indicate this state of things, and the appearance of the lungs after death, serves to support the opinion, that such is the condition of Cholera-patients. If I inject into the veins of dogs, gum water, it remains, and produces an indescribable distress of breathing, and a hoarse sound resembling that which we see in Cholera-patients; and we find that the fluid has not passed into the capillary vessels, but remains in the larger vessels. The dissection of the lungs of these animals presents the same appearance as are seen in Cholera-subjects, the same stoppage and dark color in the substance of the lungs. This is the true explanation of the difficult respiration attended with hoarseness in the Cholera.

It occurred to my mind that the subject of transfusion was not only of high interest as regards the Cholera, but that physiology in general might thereby receive improvement, and in the hopelessness of the cases of Cholera, we might try to substitute for the black tar-like blood that of young healthy persons, which, by being suited to the living economy, might stir up the heart, and thus enable this organ to free itself of the dying blood, and by the new blood give health and vigor to the nervous system. The fresh blood may give new impulse to the organism, and bring back things to their natural condition. It must be human blood which we dare transfuse, since the blood of different animals would endanger poisoning by the presence of prussic acid. Before attempted, we should take away a portion of blood, by which the circumstances associated with the operation will be lightened, without this the heart is made too full.

I made the injection by laying bare a vein under the skin in the arm, into which was introduced a small tube. The blood was drawn into a warmed cup, and the blood drawn into a syringe was thrown slowly into the vein. The injection was made at intervals, and so as to throw in, in from 5 to 7 minutes several times, an ounce at a time.

The transfusion exhibited, in the sick, the following phenomena. In the first instant the patient was only sensible of a swelling out of the veins by which the blood was carried to the heart. —Then came alteration of the pupils, sprightliness of the eyes, heavy respiration—and afterwards return of pulsation, and

warmth of the cheeks that were previously cold—the hands and feet remained cold. Death succeeded the operation in one case in half an hour. No remarkable difference in the termination of the other cases. The stethoscope indicated a thrilling sound at the heart.

The dissections made with particular care, by doctor Phœbus, presented the following appearances. The heart and large vessels were filled with black thick blood. In one case the right jugular vein was found filled with air, but it did not extend to the subclavian. In the vena cava superior, &c., was seen thick blackish and red blood. In the left ventricle was seen sometimes a thinner blood, separated from a thick black blood. The brain, as in most other cases of Cholera, was stuffed with black thick blood.

The most remarkable of all the appearances which presents itself among others, in the dissection of Cholera-patients, is the fact that the injected blood does not unite with the other blood. Does this depend upon a repulsive operation of the different kinds of blood upon each other? or is this a struggle between the dying and living matters brought into contact? or is it simply owing to indisposition to the union between thick and thin fluids. During the operation of injection, and before I was aware of what would be found upon dissection, I made these observations. A drahm of thin black Cholera-blood, which I drew from the vein of the arm, would not mix with a portion of red blood, which flowed from the arm in a stream, but remained separated. When they were mixed together, they made a marbled appearance.

There being portions of air in the right side of the heart and larger vessels, it became a question whether it was formed in the vessels, or was admitted at wounds of the veins. I have been led to believe that the air is generated in the vessels, since I have several times observed, when I had laid bare a vein, air could be seen in the vessel—sometimes it remained stationary, sometimes upon stirring the limb, the air passed towards the heart. This was the case in the subject upon whom doctor Böhr practised transfusion. I saw in several cases, in the hospital of doctor Romberg, air in several vessels, as well as air and blood distending the pia mater.

Our author here takes some pains to show that, we need not ascribe the presence of air to the transfusion, even where that operation was performed, since he is certain that his experience upon brutes is such as to enable him to inject blood into the veins, without passing in a particle of air. It is only a large quantity of air in the vessels that kills instantly, and not because it is a poison as some have supposed, but it kills by mechanical

obstruction of the capillaries of the lungs. It remains in the lungs, like mucilage, quicksilver, or other thick fluids which remain, and obstruct the air vessels—death occurs here not from derangement of the heart but of the lungs.

Our author, notwithstanding the unfavorable termination of the cases in which transfusion had been employed, seems to think that the practice is deserving of further attention in desperate cases—if this remedy fail, so do others.

We are told that in a patient who was dying, and suffering great anxiety and laborious respiration, our author, with the approbation of doctor Casper, opened the brachial artery in its upper third, and passed in a flexible tube to the heart, and, no blood flowed through the tube, even when the tube had reached the heart—the action of the heart became stronger and more frequent, and the tube was immediately withdrawn. It was remarked of this patient, that he had undergone formerly the recto-vescial operation for stone in the bladder, and a fistulous opening remained between the rectum and bladder.

It is said, in support of the fact that, there is a partial interruption of the pulsation of the arteries and a total suspension of the circulation, the following case is noticed. Our author opened the artery of the left arm of a woman, in the hospital of doctor Casper, in the lower third, and, it was with difficulty that a small quantity of black blood could be obtained. The artery was now tied with a ligature, and the edges of the wound adjusted. Strange to tell, the next day the arm, though long covered with a cold moisture, became before death, covered with a warm moisture, the skin was warm and the living aspect returned with a pretty good pulse in the radial, and ulnar arteries. This circumstance is supposed to be important because, it is an encouraging fact that, in a Cholera-patient cold and half dead, we find there is still a possibility of a renewal of the circulation.

It was observed that leeches applied to cases of Cholera shew some indisposition to take hold, when they had drawn a little blood, they were apt to let lose their hold—doctor Casper saw them sometimes die suddenly, as if they had taken poison from the skin. Scarifications either afforded but a few drops of dark thick blood, or none at all; the same thing attended the operation of cupping. The application of the strongest stimulants, even the actual cautery, would not produce vescication, but merely a little redness, or dryness, of the skin.

The process of adhesive inflammation, or union by the first intention, was not interrupted by the reduced state of health of the skin, but rather facilitated. The orifice from bleeding, or other small wounds of the skin, healed quickly—in young persons these wounds take, on severe inflammation sometimes, and

run into suppuration, as was occasionally observed in hospital cases. Our author thinks, upon the whole, that in Cholera-patients, there is a pretty vigorous condition of the plastic principle of life, a remark which he would apply to paralytic limbs; in both cases, wounds heal quickly or run rapidly into inflammation; and, in the latter case, there is a speedy termination; but, in cases of Cholera, opportunity was not had to observe the former.

We are told one might suppose, that large wounds in Cholera-patients being left open, so that they could only heal by suppurative inflammation, would remain very dry, on account of the general dryness of the body, as we see, in wounds, in cases of typhus fever, in which the process of suppuration is sometimes entirely interrupted. It has been previously remarked that wounds in Cholera-patients are very dry, charpie remains dry; and, the deposition of lymph takes place later than common. The lips of the wound remain very little hardened and pale, but after a time there is a very free secretion into the wound, of a thin purulent matter. The pus is sometimes not thicker than milk; it has a whitish yellow color, and looks much like oatmeal gruel, but a little whiter; has a faint smell, and when dropped into water it falls to the bottom, but forms therein threads and some mucilage. The granulations of wounds are of a very fine grain, and look pale. A similar appearance attended a wound made in a case of strangulated omental hernia. Six or 8 days afterwards, this patient was seized with Cholera, and died of the disease. In this case the healing process advanced rapidly, and healed with extraordinary quickness.*

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*This fact brings to our recollection an opinion which we formed long since, that, in most epidemics, if not all, in which death takes place in a very short time after the illness of the patient, there has been a gradual morbid train of actions going on, for days or perhaps sometimes longer, before an attack; and very often there are premonitory signs, which if attended to would prevent the disease from becoming dangerous, or, perhaps from forming at all.

We have elsewhere contended that inflammation is not necessarily present in the healing of wounds—the experiments of doctor Diffenbach go to support our opinion. That is, inflammation, though almost uniformly present in wounds, is not positively necessary, on the contrary, the less inflammation present, as a general rule, the sooner will a wound heal by the first intention. We may have occasion to notice this subject more extensively on a future occasion.

Our author here closes his observations—his few concluding remarks do not interest the general reader, but are rather intended for his friends, we shall therefore pass them over.

We shall not undertake to judge for our readers how far those experiments upon the living body were warranted by the attendant circumstances, we here leave each one to form his own conclusions. We may remark, however, without making ourselves parties to the matter before us that, as these cases were necessarily fatal, and the experiments did but in a slight degree increase the pain of the patient, and the subject of Cholera was, and continues to be involved in great obscurity, we do not see much room for censure.

Knowing the author, as we do, personally, we would be little disposed to admit that he would engage in novelties without a strong expectation of obtaining positive good from it.

We think his experiments go to render more certain, that Cholera is a disease of the sanguiferous system—such being the case, we have increased confidence in properly directed bleeding; but think they show what we should have expected *á priori*, that transfusion will never answer any good purpose.

ART. X. *Case of tumor on the tongue, cured by the nitrat of silver, June 21st, 1825.*

MR. H., from the Eastern Shore of Maryland, has a tumor on the tongue, about an inch in length, and one third in width, shaped nearly like the tongue; rough on its surface, and somewhat resembling the surface of the tongue of the hog, near its end when boiled; the color inclining slightly to lividness. It is moderately elevated with a well defined edge, and a considerable hardness, extending to the fourth of an inch into the substance of the tongue—a little to the left of the middle line of the tongue. It has not been painful; and it has formed in six weeks; patient can run the point of a pin into it without pain. I advised the application of lunar caustic in its dry state, and an antiphlogistic treatment.

22d.—Consultation with doctor Davidge, who agree to the continuance of the lunar caustic.

30th.—The caustic has been applied daily since last account, by rubbing the stick of it freely over the part, until it produced a whiteness over the surface of the whole tumor, which was followed each time by a pellicle, easily separated. This day the

surface is smoother, and the tumor has somewhat subsided. From this time there was a daily improvement, and in a few weeks, I had the satisfaction of seeing my patient perfectly relieved from a tumor, which he expected would require the use of the knife, and the removal of which would have disfigured the tongue, and perhaps in some degree disabled the organ of speech. I deem this case the more important, as I have cured tumors on the tongue of a similar vascular formation by the caustic.

ART. XI. *Case of fungus tumor, situated between the lobe of the ear, and angle of the jaw.*

Mrs. M. requested my attentions to her case, in the year 1825, June 30th. A large tumor had formed between the lobe of the ear, and angle of the inferior jaw, which had existed several years, and the growth of which had been moderately progressive. An attempt had been once made to destroy it with caustic—this instead of succeeding, hastened its growth, but still its growth was but gradual, till about two years ago, at which time docter Davidge undertook its removal by the knife. He informs us that he removed the whole parotid gland—it nearly healed, but never closed entirely. After remaining a little while stationary, it began to grow again—at this time there is a tumor of considerable size, having an irregular surface, and a dark reddish color. It has raised the ear off from the temporal bone, and extends from the angle of the jaw to two inches above the ear, and from the mastoid process to the middle of the cheek, and is elevated above three inches in its middle. It has bled considerably at times—there is also a pretty free discharge of a thin ichorous fluid, particularly from the meatus auditorius, which is now pretty much closed up by the swelling. She suffers much severe pain, but her health is less disturbed than might have been expected. She has not the power to open her mouth, in consequence of the disability growing out of the former operation, for the removal of the *parotid gland*, by which the muscles were palsied. Directed a lotion of sulph zinc; and keep the tumor covered with cold clay.

July 1st.—The tumor is covered this morning with a good deal of pretty laudable pus—the tumor bled considerably from one point upon opening it, but soon stopped upon applying a little lint. Dressed with Potter's clay, which was moistened, and mixed up so as to bear spreading out about the one eight of

an inch thick—it was applied between folds of gauze. The clay being thus applied, directions were left that the whole should be kept wet with a solution of sulph zinc. The clay was applied in two oblong pieces, which were applied at right angles.

2d.—Had a tolerable day yesterday, and she thinks the discharge less offensive.

3d.—Much as yesterday—sore looks rather drier; bled pretty smartly upon opening the dressings, but this soon ceased by applying lint—dressed as yesterday,

4th.—As yesterday, except that the tumor appears to be a little less colored—dressed as usual.

5th.—Nothing new since yesterday—dressed the same, but directed it to be done twice, on account of the offensive discharge.

7th.—No remarkable change—the tumor bled considerably this morning, and induced the family to dress, before the usual time.

8th.—Little or no aleration—tumor bled a good deal this morning—dressed as usual.

14th.—Has been rather more comfortable, but bled a good deal night before last—has been dressed but once a day since last report—dressed as usual.

16th.—No sensible alteration—dressed as usual.

18th.—Nothing remarkable since last account—applied the usual dressing, but touched parts of the tumor with the lunar caustic which gave no pain.

22d.—No visible change, except that one side of the tumor looks more healthy, and there is a slight extension of the disease backwards, or over to the masteid process.—Applied the caustic freely without smarting—applied the ordinary dressing.

23d.—Tumor rather more disposed to bleed—dressed with caustic.

30th.—The dressings have been continued till to-day, the surface of the tumor was covered freely with lapis tutia, which is to be applied once a day.

21st.—The tumor is not quite so free from pain, the tutia does not seem to agree with the sore; by retaining the discharge it becomes very offensive—advised the resumption of the clay dressing.

August 3d.—The part affected look much better since the change of dressing, but the tumor still increases, though almost imperceptibly.

5th.—The tumor extends very slowly, but it is less painful—no change of dressing.

7th.—Appearance much as usual—dressing the same.

9th.—Slight improvement in the appearance of the sore. We have several times spoke of a sore—we mean by this the raw, or ulcerated surface, which extended over a considerable part of the tumor. Directed the application of an ointment formed of white lead, ℥j. ung. simple ℥j. tinct. opii gt. l.

11th.—The patient is more comfortable as regards pain, but the smell is more offensive—directed lime water, in addition to the present dressing.

13th.—The tumor is less inflamed, and shows some disposition to heal, but the lime water has not yet been applied.

17th.—The tumor is a little redder, but still, I think, there is less inflammation around it—and the bulk is certainly somewhat diminished. Continue the same dressing.

19th.—The tumor is certainly somewhat less, and the edges more free from inflammation—more appearance of skinning over.

21st.—The tumor much the same in appearance. Continued the same dressing.

24th.—Tumor deepened in its color, and more uneasy—no change in the dressing.

29th.—A good deal of bleeding from the tumor yesterday, after which it was more painful. Upon the whole I think the size is reduced. Dress as usual.

29th.—The tumor remains without almost any alteration.

September 6th.—Tumor seems to sink in the middle; upon handling it slightly it bled freely; but, a little lint pressed on a few minutes suppressed it—dressed as usual.

9th.—There is a slight increase in the tumor, but its surface is cleaner, and there is less appearance of inflammation. No change in the dressing.

13th.—The tumor has been almost stationary for a considerable time. Her appetite and health is good, she sleeps well and has not much pain. Believing that this state of things could not exist so long if there was any malignancy in the disease, or if any of the important nerves of the neck were involved in the diseased mass; I now advised a course of treatment with a view to effect the removal of the disease, by the use of caustic. I entertain the hope that there may be nothing insurmountable in the case; and, since the sympathetic and branch of the par vagum nerves are not disturbed in their function, and the digestion and respiration, and action of the heart, are all natural, there is grounds for hope that these nerves are not directly involved.

It is impossible to ascertain certainly whether the tumor passes down under the jaw, so far as to embrace those nerves. The tumor is chiefly on the cheek, but passes around the ear, and

somewhat over the occiput, and over the mastoid process, but it appears to lie exterior to the sterno-mastoid muscle. The whole circumference about fifteen inches, the greatest height about three inches; its weight probably upwards of a pound. Very vascular, and disposed to bleed on the slightest touch. It resembles in its external appearance those tumors which we some times see growing from the gums.

This morning I passed a small trocar, gently and slowly through the centre of the tumor. It was not felt until it reached the sound part; and, the least pain was my concerted signal for stopping the push of the trocar. I withdrew the stilet and left the canula in the tumor—through this, I injected a small quantity of arsenic, mixed in gum water. Blood flowed upon withdrawing the stilet, but it ceased presently upon applying a little pressure with a finger. Evening—the tumor has discharged more than usual.

The parts have been upon the whole easier to-day, although she feels the arsenic slightly. It should have been mentioned that the inside of her mouth is sound.

14th.—Felt a slight giddiness yesterday, but upon the whole she had less pain, although she feels some soreness in the neck. The part around the puncture looks a little livid. Punctured again, and there was less blood from it than yesterday. She felt no pain from passing in the trocar, as far as I thought proper, but complained of a little painful burning, a few minutes after injecting the arsenic, into the puncture made this morning.

15th.—Was slightly giddy and sick at the stomach yesterday after dressing. Not more pain in the tumor, but there is some swelling about the face and chin—the part punctured looks livid, and will, I have no doubt, slough. Omitted the caustic to-day.

16th.—Had some fever last night, but feels pretty well this morning. Face swelled, tumor more flaccid about the punctures, and looks as if there was a large slough coming away. Made an incision of about two inches in depth, taking care not to go so deep as to excite the least pain—introduced a small quantity of caustic.

17th.—Tumor rather more flaccid, less painful; had no pain yesterday till midnight, at which time she felt some shooting and burning pain; no fever—Repeated the caustic, and covered with the lead ointment, having a portion of opium in it.

18th—She is decidedly better, no fever nor pain, the cheek and under jaw less swelled, and less sore; tumor still becoming more soft and flaccid—Passed the trocar down on the side of the cheek, and below the ear—after passing about two and a half inches, it stopped against a bone, the coronoid process of

the inferior jaw—this gave no pain—bled less than common.—The injection which I passed in at a puncture came out of the ear, at a point which had formerly been punctured by a lancet in opening an abscess.

19th—Nothing remarkable—no increase of fever, nor pain.—Introduced the trocar in front of the ear, and injected caustic; also into the tumor above the ear.

20th—Tumor still more flaccid and attended with less pain—health now pretty good. Bathed the tumor about two minutes with warm lime water, by means of rags kept on several fold.—I made three perforations to the bottom of the tumor, and injected, into each, a little of the juice of fresh garlic. The part bled freely—pressure, and a little lint for a few minutes, arrested it. The lead ointment was then applied as usual.

21st—There was no bleeding after I left her yesterday. The tumor looks pale to-day, and seems to be falling into ruin.—There is a pretty deep excavation below the ear; punctures did not bleed this morning—Complains of some stiffness and uneasiness about the neck; but the skin around the tumor is less inflamed, and more sensible to the touch. The swelling below the skin is softer. Dressed as usual.

22d—The tumor is falling out in sloughs, the face a little swelled. Applied lime water and caustic.

23d—Nothing remarkable—there is a slight burning sensation in the parts affected—Lime water and caustic.

24th—The tumor seems to diminish, and its surface looks pale and feels soft—Lime water, and injections of the juice of garlic.

25th—The tumor still diminishing, and there is less pain.—There is a slight uneasiness of the stomach, but no interruption of the appetite.

26th—A large portion of the tumor came away this morning; she complains of slight sickness at the stomach.

27th—The tumor continues to diminish; all the middle is deadened, but there still stands a prominent ridge all around the base of the tumor. The lower portion bleeds freely. I made several perforations, and introduced the caustic into each. She complains of some oppression at the stomach—Lime water, &c., as usual.

28th—Dressed with the garlic juice.

October 1st—The garlic dressing has been applied since last report—No remarkable change in the tumor; there is no irritation, nor inflammation surrounding it. Her health is pretty good at present.

3d—Resumed the caustic, but it escapes so much at present, owing to the thinness of the tumor caused by the excavations

made by the caustic, that it acts but slowly. The parts begin, however, to look pale, and will no doubt soon slough. While dressing to-day, she complained of a singular feeling at the heart, which she could not describe: She also felt a darting pain in her back. It was almost momentary, and could not be owing to the caustic, as it was not inserted deep to-day. Has been a good deal complaining the last two days.

4th—The caustic does not make much progress, owing to its spreading; so that it cannot be confined to the roots of the tumor. Dressed to-day with garlic and lime water.

5th—Nothing remarkable; dressed with caustic.

6th—Says the caustic gave her rather more pain than usual; but it has made some impression on the tumor.

7th—Tumor still bleeds, but much less freely than formerly, and is becoming pale and livid. Applied caustic.

8th—The caustic yesterday gave some pain, but did not affect the tumor. It looks more livid—along the temple and cheek, the tumor seems to separate from the skin. I passed a seton from the base of the tumor, from without into the excavation in the middle of it, first rubbing the cord with the paste of arsenic, drew it into the substance of the tumor.

9th—Nothing remarkable. Applied the garlic juice.

10th—Suffered severe pain yesterday nearly all day. The wound is very much acted on by the caustic. The tumor is flattening, and the part along the cheek seems to separate from the skin. Dressed to-day with the lead ointment.

11th—The caustic has acted pretty freely. Applied the caustic to-day by rubbing it on the surface, instead of inserting it into the tumor.

12th—Much as usual—tumor seems to subside somewhat.

13th—Dressed with caustic.

14th—Suffered a good deal of pain yesterday, and she complained of a good deal of debility. Appearance of the tumor the same. Dressed with garlic.

15th—The surface of the sore is covered with an increased quantity of pus. Dressed with lime water, and, lead ointment, spread on lint.

17th—Diseased parts seem to suppurate more freely; the tumor is wasting—she felt some pain yesterday. Applied garlic and lime water.

18th—The tumor is wasting by the extensive suppuration which is now going on. Dressed with lime water.

19th—The swelling is still lessening; it was pretty easy yesterday; complained, while washing the sore with lime water, very much of her eye. A part of the tumor has entirely sloughed out, and left a portion of loose skin. I commenced lessen-

ing the dimensions of the sore to-day, by endeavoring to approximate the skin around, by means of adhesive plasters. Applied the lime water.

22d—The sore continues to suppurate freely. There is a little thickening above the eye which looks somewhat threatening. Applied the caustic on the surface, and injected it as formerly by making punctures in the diseased mass, and throwing in the caustic.

23d—She had a pretty good day yesterday. Her pulse is feeble and somewhat hurried. Sits up all day; appetite and health pretty good. Dressed with garlic, and adhesive strips.

24th—Applied the caustic partially to-day, and used lime water and adhesive strips.

25th—The tumor seems to flatten, but I do not like the appearance of the swelling under the chin. Dressed with lime water, and injected caustic.

26th—Dressed the sore with garlic juice, and rubbed the edges of it freely with lunar caustic.

27th—Dressed with lunar caustic and applied a roller.

28th—Applid the caustic in part, also arsenic.

29th—The sore has become more painful. Dressed with caustic and lime water.

30th—A considerable portion of the tumor on the cheek has sloughed out, down to the malar bone. Sore looks less irritable this morning. Dressed with lime water and caustic.

31st—Dressed with a slight portion of arsenic, spread in a paste or on lint—into the thicker parts I cut incisions, and introduced lint spread with a little of the arsenic.

Nov. 2d—Feels pretty well this morning. Dressed, as usual, with the lime water, and caustic.

4th—A considerable portion of the lower jaw bone is denuded, but a considerable part of the lower portion is clean and healthy. Applied a little of the arsenic to the diseased edge.

5th—Suffered very severe pain yesterday; the caustic seems to have affected the vessels of the ear, so that it appears as if it would fall off. Dressed with garlic, of which she complained much.

6th—Nothing new; dressed with caustic.

7th—As usual—dressed with garlic.

8th—No observable change in the tumor, but she was unwell and feverish yesterday, and complained of weakness. The ear came off without giving her pain.

9th—Cut away the edges of the sore, so far as they were insensible. Applied the lunar caustic.

10th—Dressed with garlic, from which she suffered intense pain. The sore generally looks clean, but some parts of its edges assume an unfavorable aspect.

11th—Nothing remarkable; the pain, noticed yesterday, went off in a few minutes, and she had a good day. Applied the caustic partially, and covered the sore with the lead ointment.

13th—The sore looks cleaner, but it has rather an unhealthy appearance. Dressed by washing the sore with lime water, and applied garlic juice diluted.

14th—As usual—applied arsenic moderately to part of the edge of the sore.

15th—She suffered severely yesterday from the arsenic, and the sore has become very dry. Dressed with the lead ointment.

17th—As usual, except that there has been rather more pain. Applied lunar caustic.

18th—Aspect favorable to-day in all respects, health improving. Dressed with lunar caustic.

21st—As usual; dressed with garlic.

24th—The sore seems to be improving, the edges, which were thick, have thinned down a good deal.

25th—Had a good deal of pain yesterday, but the sore is still improving. Dressed with diluted garlic juice.

26th—The sore looks well, but she complains of an unpleasant giddiness, though it is but slight. The end of the mastoid process of the temporal bone is bare, and the upper portion of the digastric muscle is plainly to be seen, passing down in its course to the throat. There is a deep cavity just below the auditory foramen, but the bottom of the wound looks healthy.—Dressed with lunar caustic.

29th—Nothing remarkable since last report. Applied caustic and a little arsenic to a point or two.

30th—There is no visible change in the sore, but she complains of great weakness, and sickness at stomach. She has probably eaten animal food too rich for her stomach, or the cicuta may have produced some derangement, applied to so large a raw surface. Discontinued the cicuta ointment, and dressed with lime water, and the white lead ointment—to take a portion of ol. ricini.

Dec'r. 1st—The oil which she took yesterday acted well, and the stomach is somewhat relieved. Sore as usual. Dressed with garlic.

2d—Nothing remarkable—the sore looks well, stomach still unsettled. Advised dose of calomel. Dressed with lunar caustic.

3d—Health better; sore looks more healthy.

4th—As usual—Dressed with lunar caustic.

5th—Health somewhat improved, but she complains of weakness and giddiness. Dressed with lunar caustic.

6th—Nothing new. Dressed with lunar caustic.

7th—Nothing new. Dressed with lunar caustic.

8th—The sore seems to matter more freely, and its aspect is favorable. Applied a little arsenic, and dressed with cicuta ointment.

9th—Applied the vegetable caustic to some part of the sore—it gave a good deal of pain, but was not very severe.

11th—The caustic acted pretty freely yesterday, but the surrounding surface does not look so well as I could wish. Dressed with the cicuta ointment.

14th—As usual—dressed with lunar caustic—the sore being more offensive than usual, I had it washed with lime water.

16th—Sore looks better, and her health and spirits are better—very little of the diseased mass remaining. Applied the vegetable caustic very lightly, she complained of its giving violent pain.

19th—The small amount of diseased edge seems to lessen.—Dressed with lunar caustic, and a particle of arsenic to a spot on the cheek.

21st—The arsenic applied to the cheek has acted freely, and has caused the face to swell considerably. Applied caustic silver.

22d—Cheek continues a good deal swelled—there is now very little discharge. Dressed with garlic.

23d—Nothing remarkable—dressed with lunar caustic.

24th—The cheek continues much swollen, with other signs of severe inflammation. The discharge from the sore looks healthy, but still it does not look as well as I could wish. Dressed with caustic silver.

25th—As usual—dressed with lead ointment.

26th—Dressed with lunar caustic.

27th—The sore looks well—is covered with good matter, and seems disposed to extend—Lunar caustic.

28th—Nothing new. Dressed with garlic—ulcer seems disposed to extend upon the neck.

29th—The sore looks better, and is covered with good pus: lunar caustic.

30th—Sore looks healthy, except a small part of the edge which assumes a cancerous appearance. Applied the caustic silver without giving much pain—also laid a piece of the same on the worst looking part of the sore. Her general health has improved somewhat.

31st—Nothing remarkable—applied the garlic juice.

Here the notes of this case end. It will have been observed, by our readers, that when we commenced with caustic, we had a large fungous bleeding tumor, situated immediately over the angle of the jaw, and of course covering the important structures which lie at this point. We think it affords an important precedent in the treatment of tumors, to see that we can thus

safely cut them away, by means of caustic, without doing injury to important structures immediately adjacent.

This is a practice which we have several times employed to great advantage, in cases of tumors that could not be removed by the knife; and we believe the practice is peculiar to the present writer—we mean the method of puncturing tumors to the bottom, and injecting caustic substances, instead of applying the caustic to the surface. In this way, by applying the caustic to the trunks of supplying vessels, instead of their extreme branches, we succeed far more certainly, rapidly, and with much less pain, as the caustic will not come into contact with the skin.

In the present case, instead of increasing the suffering of our patient, they were greatly alleviated; and her life prolonged several months, as she must inevitably have died from the copious prostrating hemorrhages which were occurring frequently, sometimes in the night, so as to call for the attention of the family physician, at all hours, before we were called in.

At the time our notes of the case terminate, we were called away on public business, we left the patient doing well, as all about her supposed—the tumor had been wholly removed, and a great diminution had taken place in the size of the sore.—Several parts were in a healing condition, and the only remaining doubt in the case, was some apprehension that part of the edge had a cancerous appearance. But certain it is, she was improving in every respect. A day or two after we left her, she was seized with symptoms of influenza—her family physician paid every attention, but such was the violence of the case, that she died after a few days illness. At this time the disease was quite epidemic, and a considerable number of aged and infirm persons were carried off by it. It was a source of extreme regret, that we had not the opportunity of following out the case —a restoration which we do not think improbable, would have been, in the highest degree, pleasing, as my patient was one of the very best of women—she had no superior.

ART. XII. *Remarks on Lactation; with observations on the healthy and diseased condition of the Breast-Milk, &c. &c. By* EDWARD MORTON, M. D. (Taken from the London Medico-chirurgical, Review for January 1831.)

[This being a very brief review of a portion of doctor Morton's work, we have thought proper to copy the whole article, and shall distinguish the remarks of the author, from those of

the Reviewer, by marking those of the former, by the double commas.]

Some part of this work, (says the Reviewer,) was published four years ago in a cotemporary journal, and we are informed by the author, that subsequent experience in infantile diseases has convinced him of the correctness of the views which he then broached. The volume is divided into three chapters, the first of which contains nothing that need detain us here, the second is on the disorders produced by lactation, especially protracted lactation.

"In cases of extreme delicacy of constitution, lactation will often produce the worst effects. Many young ladies, on becoming mothers, are incapable of supporting the constant drain to which the wants of their infants subject them—they lose their good looks, become gradually weaker, and as their strength gradually declines, their milk is simultaneously lessened in quantity, and altered in its other properties.

If the suckling be still continued, their debility still increases, distressing pains in the back and loins succeed; the patient becomes extremely nervous as it is termed, and are unusually susceptible of ordinary impressions; pain in the head, often of great violence, follows; which, in some cases, is succeeded by delirium; in others by absolute mania. Nor is this the whole catalogue of ills to which, in such cases, the unfortunate mother is liable: the appetite fails, distressing langor is felt by day, while copious perspiration deluge her by night, and dissipate the last remains of strength—producing a state which may easily be mistaken for, or terminate in, true pulmonary consumption; finally, the sight becomes progressively weaker, until vision is almost destroyed; the eye-lids exude a glutinous secretion, and ophthalmia itself is occasionally induced. These are the symptoms too often caused by lactation in delicate debilitated habits, even a few months after delivery; the same symptoms also are observed when suckling has been injudiciously protracted beyond the period to which it should be confined.

A few only of the foregoing symptoms may be noticed, or nearly the whole may present themselves on the same patient; and when this happens, unless the cause which has given rise to them be at once detected, and appropriate treatment employed, the most serious consequences may be apprehended."

In such cases, doctor M. observes, half measures are useless, or worse. Suckling must be discontinued altogether, for reasons which the author states, and which are sufficiently cogent. The obvious dependency of the foregoing symptoms on debility, will lead the practitioner to the employment of tonics and other means of invigorating the constitution. Injudicious practition-

ers have sometimes recourse to cupping for headach, which of course aggravates the evil. The occurrence of miscarriage from suckling is illustrated by a case in private practice; and the author says that it is made public at the desire of herself. We quote this case.

"Mrs. A———, a lady of delicate constitution, about twenty years of age, three or four months subsequent to the birth of her first child, began to find her milk gradually lessen in quantity; it had also much changed from its previous appearance, resembling at the time just stated, a yellowish turbid serum. Her child became emaciated; and diarrhœa supervening, my professional services were required. My advice was, that the child should be at once weaned, and a suitable wet nurse, if possible, procured; neither of which suggestions were followed. I urged the necessity of this measure more particularly, because Mrs. A. was daily getting thinner and weaker; she also complained of great pain in the head and back, and of an increasiug dimness of sight, which made her fear she should become blind; but the mother-in-law of my patient, being unfortunately of the opinion that pregnancy in the latter case would not occur during the continuance of lactation, recommended that the child, although chiefly supported upon spoon-meat, should occasionally be allowed to take the breast; and this plan, notwithstanding the wish of Mrs. A——, to the contrary, and my own remonstrances on the subject, was adopted—the effects of which were to increase the mother's ailments, as well as those of her infant. Things went on thus for some time longer, when I once more endeavored to persuade Mrs. A——, to follow my advice, observing, that by an opposite line of conduct, she was not only injuring her own health, but that of her child, neither of which, I assured her, in my opinion, would be re-established till the latter had been weaned. I expressed also my complete incredulity* as to the non re-occurrence of pregnancy, in consequence of her infant remaining at the breast; and I added, "it was my firm conviction that if you be pregnant, or should shortly happen to become so, you will miscarry? About a week after this conversation she was suddenly seized with flooding, and what I had predicted took place. She now left off suckling, and in about a month, under suitable treatment, completely got rid of all her former complaints; the child also began immediately to improve."

*Are we to understand our author to say here that this does not influence conception? If so, we can assure him, we have known several instances where the accidental death of the children has led to earlier pregnancy than usual.

The third chapter embraces the subject of diseases in children, resulting from protracted lactation. To this source our author traces cases of vomiting, diarrhœa, debility, scrofula, tabes, convulsions, epilepsy—and, lastly, menigitis, with hydrocephalus. This is a long and frightful list of maladies, sucked from the breasts of our mothers! It is to menigitis, however, that doctor Morton chiefly directs his attention. The conclusions to which our author has come, from experience, are as follow:

1st. That if children be suckled for an undue length of time, they will be liable in consequence to be affected with menigitis, or influx of the membranes investing the brain.

2dly.—That should they not become affected with the disorder in question, during or soon after the time they are thus improperly suckled, they will nevertheless acquire therefore a predisposition to cephalic disease at some future period of their lives.

3dly.—That children who are suckled for an undue length of time, when laboring under other diseases, will be much more liable to have the head secondarily affected, than children brought up in a different manner.

4thly.—And lastly, that the same effect will take place in infants, if suckled by women who have been delivered an undue length of time; although the infants themselves may not have been at the breast for too long a period."

The author then proceeds to give an abstract of fifty-two cases, illustrating the foregoing views. Among these are five cases communicated by Mr. Griffith, an intelligent surgeon in Pimlico. For these histories we must refer to the work itself.—With respect to the manner in which protracted lactation causes the complaint, doctor Morton has no doubt that the menigitis is a secondary affection, arising from the deranged state of the function of the digestive organs—that derangement itself originating the depraved condition of the breast milk. Dr. Morton supports this opinion by the authority of other writers, and of Mr. Dendy in particular. The following passage is from the latter writer.

"It may be truly said, that the infantine disease excited by milk of a deleterious, or simply impoverished quality, grows by what it feeds on? and we shall witness the internal debility, and the infantine disorder running their course together. Tabes is the natural consequense of this error; but its effect is evinced by the occurrence of other disorders. A defective degree of nutrition, as I have elsewhere stated, predisposes the system to become influenced by comparatively slight excitement; and thus,

in addition to the direct excitement of disease, it becomes indirectly its predisposing cause. Under *its influence the serous membranes become readily the seat of inflammatory action.*"

The author concludes his work with an invitation to practitioners, to convey to him such information as they may possess on this interesting subject, in order that he may avail himself of it in a new edition. We think doctor Morton has adduced sufficient facts and reasons for drawing the attention of the profession to the disease resulting from protracted lactation.

[We should be pleased to draw the attention of the profession, of this country, to this interesting subject; or any thing which so deeply involves the welfare of our infantile population. Every medical man must be aware of the ravages made upon the human family, during the period of early infancy. To what shall we ascribe this fatality among children, that are born perfect and healthy, and many of these suffer? Mainly, we have no doubt, to the want of proper skill or attention in the application of our means, for their sustenation and comfort. Our little innocents are doomed to suffer, some by too much care, some by the want of it; some for using too much physic, some for want of it: and a greater part, I have no doubt, for want of a right adaptation of the ordinary and daily attentions, formerly termed the non-naturals.]

ART. XIII. *Clinical Lectures, by doctor Perry, on Burns and Scalds.* (*London Medico-Chirurgical Review, from Glasgow Journal.*

It cannot be denied (says the London Reviewer,) that much discrepancy of opinion exists on the treatment of burns and scalds, that much uncertainty obtains in the minds of the less experienced members of the profession, and that much bad practice is a necessary consequence. As an instance of this we may mention a case which we lately witnessed. A child was severely and extensively burned, from his clothes having accidentally caught fire. He was taken to a chemist's, and soused in cold water. When brought to the hospital, where we received him, he was cold and shivering in his half-burned wet clothing. In spite of warmth and stimuli, the collapse increased, and in a few hours the child was dead. We have seen but too many instances of what we cannot but designate incompetence, in the treatment of these injuries; and, as the majority of mankind do not think for themselves, but shape their conduct by the precepts of others, we shall still be constrained to lament the indis-

cretions of practitioners, till the rules of practice are settled on a firmer basis, and the principles of treatment more generally agreed to. It appears to us that surgeons have erred in looking on burns in too particular a manner. A burn, said they is a burn, and it ought to be treated with heat or cold, lotions or ointments, flour or cotton, as their fancies led them to imagine, or experience seemed to dictate. Yet, surely all this is highly unphilosophical, and theory has been but the herald of empiricism. A certain quantity of caloric reddens the skin and produces a vescication, a greater quantity kills the cutis, and it assumes a white appearance, a still larger amount kills other parts or tissues as well as the cutis, and a slough of a greater or less depth is the consequence. Are all these conditions of parts adapted for one treatment, to be remedied by one agent or class of agents? Reasoning would seem to say no, and experience in judicious hands confirms its dictates. For our own part we have come to the conclusion that no one method of treatment is exclusively appropriate to all the varieties of burns.

The author of the paper in the Glasgow Journal, (says the Reviewer,) to which we shall now direct our attention, must, from his situation in the infirmary of a manufacturing town like Glasgow, have many opportunities of studying the effects of scalds and burns. We are therefore induced to notice his opinions, and record his experience for the benefit of our readers. After criticising Mr. Kentish's views, he makes the following remarks.

"It ought to be remembered that the part generally injured by heat or fire is the skin; a texture liberally supplied with nerves, blood vessels and absorbents, and those all defended by and supported by the cuticle, which adheres firmly to every part, and derives its nourishment from the capillaries. Under the cuticle terminate the sentient nerves, forming part of the reticular coat, and supplying the capillaries thickly spread upon it, with the power of action. When heat is suddenly applied in an over degree, it easily penetrates the cuticle, preternaturally excites the nerves, and increases the action of the exhalent vessels, which throw out the serous fluid which they circulate so rapidly, that the cuticle which defends the extremities of the nerves, is quickly raised, and forms a blister, and if removed, the nervous papillæ are exposed, and sensation increased. The stimulus of heat being now withdrawn, the capillary vessel having been over excited fall into a state of atony or debility, and being unsupported by the cuticle, easily yield and become so dilated, that those which formerly only admitted pure scrum now admit red globules, and from their distension, swelling redness, and increased sensibility is the consequence; still the part is not deprived of life, but capable of being excited to healthy action. Or the degree of

heat applied to the part may be so great, that the cutis vera shall be partially, or even wholly destroyed, or so far disorganized that it soon dies, and must be separated from the living parts; a process, which in a healthy state of the constitution, nature sets immediately about leaving an ulcerating surface, which begins to heal around the edges, if the constitution is good, and the treatment has been properly conducted, even before the eschar had been fully separated from the centre. Or 3dly—the skin and subjacent parts may be so completely disorganized by the first injury, that it becomes black and incinerated, and must be thrown off like any other eschar.

If the burn is extensive, and the shock to the system great, as it generally is in such cases, the power and action of the brain and vascular system are so much diminished by the sudden exhaustion of the nervous energies, that the blood leaves the surface and extremities, and accumulates in the internal and larger vessels to such a degree, as to impede the action of the heart and lungs, producing dyspnea, and sometimes an effusion from rupture of small vessels takes place, either among the brain or spinal marrow; and in children, the congestion or engorgement of the vessels of the brain, unless attended to, frequently ends in serous effusion upon that organ. I have reason to believe, too, in some instances, where the circulation has become so languid that the pulsation could not be distinctly felt, that the blood had coagulated before death in the heart and larger vessels, by which circumstance, restoration by the exhibition of otherwise sufficient stimuli, was prevented.

In other cases, where the apparent injury is not so great, the constitution may be so weak, that it is overpowered by the shock; the pulse is feeble; the extremities cold, the patient shivers, is restless, falls into a state of stupor, and sinks without complaining much of pain; or secretion may take place, accompanied with fever, and much constitutional excitement, on the subsidence of which, the patient may sink: this effect the more readily takes place, if too free recourse is had to the lancet, to subdue the excitement of the system. It often happens that while portions of the skin and adjacent parts are so severely injured, as to be completely disorganized, the surrounding parts may have been only partially over-excited, and still having a portion of vitality, are capable of being acted upon by external stimuli, and consequently, in a state requiring topical application from the former; this is a point too frequently neglected in the treatment."

We conceive that, with much that is undeniable, there is some little speculation in the foregoing quotation. On the withdrawal

of the stimulus of heat, says doctor Perry, the cutaneous vessels became debilitated, yield, and carry red blood instead of serum. Now a scald produces redness of the skin, which remains for some time. If the skin in this state be stimulated, we frequently have vesications and the other consequences of inflammatory action; but if it be soothed by sedative applications, the redness, heat, &c., for the most part pass away quietly enough. Can it be said that the capillaries were dilated and debilitated?—if they were so, that debility was aggravated by stimulants, and relieved by sedatives. Dr. Perry relates five cases, in order to show the description of treatment applicable to the different varieties of burns.

Case 1. "A. B. a child about two years of age, was scalded over the face, neck, and breast, with hot or boiling water; the cuticle was in various parts raised into blisters, but not abraded, except a part of the left side of the breast, where the skin had been rubbed off in removing the clothes, the whole face and neck were of a high red color; cold water had been applied in the first instance; twenty minutes had elapsed, from the time of the accident, when equal parts of whiskey and the common vinegar of the shops were gently applied with linen cloths, which were kept constantly wetted, without their being removed.—Carded cotton was at the same time applied to the breast, the child soon ceased crying, and in less than half an hour fell asleep. At the end of three hours the cloths were taken off and the parts examined; the blisters had fallen, and the redness was nearly gone; the cloths were again applied, wetted with spirits as before, with a less proportion of the vinegar, and continued till the next morning; the child passed a good night; the blisters had disappeared; the face had rather a pale bleached appearance; the cloths were allowed to dry, then removed, and a little of the resinous ointment, (to be afterwards described,) was smeared over the face, and that portion of the neck to which the cotton was not applied. In three days after, the patient was allowed to have his face wholly uncovered. Slight disquamation took place over some parts of the face, particularly the left cheek and chin. The cotton remained adherent for about twelve days; when removed, the cuticle had separated, leaving the parts underneath sound, but of a reddish color, and the redness of the face had wholly disappeared. There was no constitutional treatment except a laxative required."

In the next case in which the face was scortched by gunpowder, being swelled and in parts vescicated, warm vinegar and spirits were applied to one part, and cotton wool to another. In twenty-four hours the spirituous wash was discontinued and a turpentine ointment applied. The parts thus treated were well in

six days; the cotton separated, leaving the surface beneath well in twelve days. The next case will show the treatment of a burn of some severity.

Case 3d. "I. B., a collier—2d August 1831—this morning about 3 o'clock, while at work in a pit, (with his face, neck and arms uncovered,) was exposed to an explosion of inflammable gas, and admitted into the infirmary about 7 o'clock A. M.—Both arms, hands and face, with a part of the right side, are vesicated, and of a dark, ashy color, except where the vescicles are broken, where the skin beneath is of a brownish color. The neck and ears are also scortched. Is chilly, with some nausea. Bowels costive. Had forty drops of laudanum on admission.—℞. submur. hydr. gr. iv. opii. gr. j, m. sumat statim.

℞. Terebinth. venetæ ℥j. adeps suill ℥iij. m. ft. Liniment. hoc curen. brachia et manus. The cotton-wool to be applied to the ears and neck. Next day the face and arms were much swollen; tongue dry, with much thirst. Pulse 100. No stool. Habt. statim bolum commun. et enem. domest. vesp. repet. mist. diaphoretic.

On the fourth day after admission, on changing the dressing, the sides and arms were found to be suppurating freely, and less swelled. The bowels had been freely opened. Tongue dry; much thirst; pulse 100, sharp. To have a solution of salts with senna, and the diaphoretic mixture.

9th—Has improved considerably, heat of skin moderate; pulse 100. Expresses some desire for food. Tongue white; thirst continues. Complains of smarting pain from the ointment.—The ointment to be diluted with equal parts of hogs lard. To have ℔j. of porter daily. Contin. alia.

10th—Was put upon full diet, and the same ointment continued, under which he began to improve rapidly. The cotton separated from the ears and neck, about the sixteenth day after admission, leaving the parts beneath sound. The fingers were longest in healing, having been most severely scortched. They continued to be dressed with the diluted terebinth. ointment, till the 10th of September, when he was dismissed cured, the skin every where smooth, and without scars."

In the foregoing case, it will be observed, that the extent to which the tissues were altered and injured by the heat, is not accurately described. This is a fatal omission. We need not describe any other cases. They are mostly specimens of burns of considerable extent, which were treated by terebinthinate applications, and proved fatal. In one case, that of a female aged forty-five, the burn was extensive on the left side of the chest, and the part was hard and of a dark color. Under the emeticocathartic mixture at first, with turpentine dressings, and subse-

quent tonics and generous living, the slough separated, and the patient was dismissed cured in two months.

Dr. Perry started in the early part of his lecture or paper, with condemning exclusive and empirical practice, yet so far as we see, his own is exclusive if not empirical. He seems to have no notion—that the parts are debilitated; one creed of treatment—that they ought to be stimulated. Now we do not believe that the skin which is merely reddened or vescicated, is to be treated as skin destroyed, and to be thrown off. Is not skin vescicated by heat, under nearly the same circumstances as the skin vescicated by cantharides? The action is more rapid, but in kind it is similar, in consequence it is analagous. Well, we treat a blistered surface by mild applications, while we are directed to treat a burned one by stimulants. It may be said that the reasoning is specious, but not borne out by the results of practice. We contend that it is so. We have treated many burns of all kinds and degrees, and we do prefer the sedative treatment for those of the kind we have mentioned. If a patient applies to us with vescication and extensive redness of an extremity, or even the trunk, the *cutis itself not being killed* partially or totally, we wash the surface with tepid or even cold Goulard's water, and dress it with lint or linen spread with a mixture of the ointments of lead and zinc, taking care to prick with a needle the larger vescications. Over the whole we lightly apply a roller, and if necessary keep it wet with Goulard's water. This dressing is to be continued for three days, when the redness will usually have disappeared, and the vescicated skin have separated, leaving the exposed cutis either suppurating or cicatrized. If the latter, of course little more need be done; if the former, we have recourse to the following means. We wash the exposed surface, which looks somewhat like a strawberry, from the prominent red points in the cutis, with a strong solution of the sulph. zinc, gently dry it, and then dust it freely with the lapis calaminaris or some other absorbent powder, applying over all some ointment spread on linen. Frequently this will effect the cicatrization of an extensive surface, but if portions still appear inclined to suppurate, we repeat the application of the powder as often as may be necessary. We can conscientiously assert that plan of treatment, conjoined with the proper use of purgatives, salines, and, when necessary, tonics, is more successful than any other which it has been our lot to witness. There are many particulars of course into which our narrow limits prevent us from entering.

When the cutis is killed, we are decided advocates for stimulated applications, and we know of none which are preferable to turpentine. Cotton has been lately cried up; we have seen it

tried in some cases, but with no great success, and on the whole we think not generally applicable. The following opinion of doctor Perry, eminating from a place where cotton was said to be so successful, deserves consideration.

"In all cases where no good opportunity exists, of the patient being carefully dressed, and attended to, it is an exceedingly good application, particularly in scalds and superficial burns.—Where the burn is so severe, that subsequent vescication must take place, the applicaton of the cotton-wool is sometimes attended with very unpleasant circumstances, particularly in summer; by the breeding and nestling of maggots in the purulent discharge, and about the body of the patient, producing excessive irritation, is not the least."

In mild cases we imagine that the treatment which we have described, will be found more convenient and successful; in severe cases the objections raised by doctor Perry are of a serious character. On the whole, we agree with doctor Perry in his reprehension of the cold water treatment, but we think he has conjured up more local debility than really exists, and attempted to lay the sprite with a stimulating spell, more potent than is absolutely necessary in all cases. We may return to this subject on another occasion.

[The melancholy case related in the commencement of the foregoing observations upon burns, bring forcibly to our recollection a fact, which came to our knowledge a few years ago; and, it is one which we had from the practitioners own lips. A man being badly burned, (the exact nature of the case not recollected,) was seen immediately afterwards by a physician, or a man who passed for one; and who bled him, to use his own words freely. Now we have found that an invariable attendant upon severe extensive burns, is chills, more or less considerable. This appears to arise from the prostration growing out of the severe shock and violent pain. And it was owing to this tendency, that is to be ascribed the chills, prostration, and death of the child, whose cases has been mentioned, by doctor Perry—and, this it is, that, makes it so uniformly improper, according to our experience to apply cold to any considerable scald or burn.

If we could treat such cases with a single eye to the local disease, we believe the most rational and successful practice would be the application of cold, but so much do the constitutional power generally partake; and, take on this chilly and chilling condition, that the stoutest individuals sink, or suffer under the pernicious efforts of cold dressings. It seems to follow, as an inference from this position, that where the burn is slight, and the pain of course comparatively moderate, cold applications are well suited to the cure of burns—this we believe is most certain-

ly the case, and we believe with doctor Johnson, that, there is nothing better than Goulards' water in such circumstances.

Nothing, however, in the treatment of burns strikes us with so much surprise, as the almost total omission of a free use of opium.

We believe that a fatal tendency is often given to cases, by the omission to administer opium, so as to moderate, if we cannot suppress pain. No physician should visit a severe case of burn, without taking with him opium in some form; the tincture will, of course, be found the most convenient in such circumstances. We have given twenty drop doses to infants a year old, without observing any soporific effect from it; on the contrary, it has much abated, suffering, as well as the chills, which are so painfully present, in most cases, as the pain of the part injured. To an adult, we may unhesitatingly give a tea-spoonful, and even two, where the injury is great; and, repeat every half hour till the suffering are tolerable: after which it must be given in much smaller doses, and repeated less frequently.

Doctor Perry seems to plume himself upon his theory—the fact is, that, there is nothing within the range of occurrences which come under the notice of the physician, which shows the uncertainty, nay, the futility of speculation as do burns. In proof of this opinion, we need only mention the experience of doctor Johnson, who tells us that mild sedative dressings have been attended with results perfectly satisfactory in his practice: to this we can respond to the fullest extent, within the bounds which the doctor has set for it, viz, mild cases; and so do we agree, in his opinion, of the good effects of the turpentines, in extensive and severe cases. But, on the other hand, we know equally well, from actual and ample observation, that the turpentines, provided they are used early, do quite as well as any thing whatever. We have again and again witnessed with the sweetest satisfaction, children sitting with burns and scalds of considerable severity, that is, amounting to vescication, and various inferior degrees of lesser intensity, quite easy and quiet, while they were immersed in turpentine, and ready to cry out the moment it was removed.

Such being the fact, it is useless for us to speculate upon notions of the morbid phenomena set up in burns—our practice here is entirely imperical, and involved in great obscurity as regards the rationale of our best remedies. Doctor Rush has somewhere suggested the thought, that opposite extremes meet in the same point; but, in the case before us, we see remedies, which in their character appear to be diametrically opposite to each other, producing the same effects while the diseases is the same. Thus we have a burn, we apply powerful stimulants,

pains is abated, and a cure results in good time: in another case apparently similar, we apply Goulard's water, cold lime water liniment, &c. and all goes on equally well: now to what can we ascribe this very extraordinary circumstance?—why, there is in all those cases *supersensation*, and our first indication of cure is to let down, so to speak, this supersensation, or high state of excitement, so far as to remove, as much as possible of the pain dependent upon this state of excitement—we know from experiment that this can be done by certain stimulants, or certain sedatives; and, as regards the local affection, as well with the remedies in either class—how this effect is produced we know not. The one set may act in some degree specifically upon the nerves, the other by simply reducing the temperature, and in that way lower nervous excitement. Or, perhaps, the stimulants reduce excitement, by their tendency to evaporation, and hence the fitness of the turpentine, or spirituous application.

We consider a burn or scald as a case of supersensation, and we look upon supersensation to be what has been termed irritation; then we believe that irritation is the proximate cause of inflammation. Prevent, as far as possible, the formation of this irritation, and you prevent the inflammation. This we know may be done indifferently, with certain stimulants or sedatives. We have said above that as regards the local concern, there is little or no preference, as far as our experience enables us to judge; but owing to the remarkable tendency to chilness which almost invariably attends considerable burns, we believe that cold is not only less proper, but that it is often productive of danger, and even leads to fatal consequences.

We wish briefly to repeat, that we have treated burns of almost every grade, with the most satisfactory results, by the turpentine. Our method has been to blend the turpentine, by mixing with it one fourth of sweet oil, for the first few hours; afterwards we prefer having a little white wax dissolved it, which does not prevent a sufficient evaporation of the spirit, and leaves a very thin pellicle of wax over the raw and highly irritated surface. After the irritation is pretty well subdued, say in one, two, or three days, according to the severity of the case, we change the liniment so far as to apply it for merely wetting the part, and apply, as a permanent dressing, basilicon rendered more stimulant, and made thinner, by adding a portion of spirits turpentine.

Where there is destruction of the true skin, and we of course must have suppuration, we change the above dressing, as soon as the chilly state of the body is over, which will generally be in less than twenty-four hours, for emollient poultices.

Where we find sedatives in use when called in, if chilness does not forbid their employment, we have then continued—but never let your patient suffer for want of opium, and guard against the chills.

ART. XIV. *Observations on Fever.* *By* HORATIO G. JAMESON, M. D.

73. Our readers will recollect that, we commenced some observations on the subject of fever, in our last volume. By turning to that volume, page 714, it will be seen that, we have there considered the classification of fevers, and their causes; and have offered some reflections upon the subject of susceptibility, which we believe are in some degree novel, or, at least, presented in a new aspect. We now purpose continuing the subject of fevers generally, but intend, in the first place, to offer some reflections upon the subject of *specific causes* of fever.

GENERAL OBSERVATIONS OF SPECIFIC CAUSES.

74. In giving play to our reflections, the first thing which presents itself is the fact, that doctor Sydenham has, long since, paid particular attention to this subject, and thereby improved the practice in an eminent degree: he candidly acknowledges the difficulty and the uncertainty of this branch of medical learning: Rush's edition page 3, he says, "1st. If one were to examine all the branches of physic, nothing, perhaps, would appear so surprising as the different, and perfectly dissimilar face of epidemic diseases; which do not so much relate to, and depend upon, the various seasons of the year, as upon the different constitutions of different years.

75. "2. And this manifest diversity of these different diseases still further appears, not only from their proper and peculiar symptoms, but also from the different methods of cure they respectively required. Hence it is clear, that these distempers, though to less accurate observers they may seem to agree in their external face, and certain symptoms in common, are, in reality of very different and dissimilar natures. Whether a careful examination, such as perhaps, could not well be made in the lifetime of one man, might show, that certain tribes of epidemic disorders, constantly follow others, in one determinate series, or circle, as it were; or whether they all return indiscriminately, and without order, according to the secret dispositions of the air, and the inexplicable succession of seasons, I am not certain."

76. Upon these observations of doctor Sydenham, doctor Rush has made the following remarks: The question has long been the object of attention, and inquiry by physicians. Modern observations render probable, epidemics do not succeed each other in such a regular order as to afford a prediction from the presence of any one of them, what will be the nature of its successors, except as to its force or degree of violence." We presume this declaration, of our countryman, will accord with the observations of physicians in this country, and perhaps, every where else. But let no one imagine from this observation of Rush's, that he does not acknowledge the fact, of certain constitutions of seasons, which both engender, and qualify over diseases. Neither Rush, Sydenham, or any other man, has been able to explain to our satisfaction, to what these constitutional differences are owing. By bearing in mind, however, that we can in some degree foresee the degree or violence with which a disease will probably be attended, at an early period of an epidemic, we are often enabled to meet it at once with the suitable treatment.

77. Sydenham continues, page 3, the subject mentioned 73, and 74, and says: "This, however, I am convinced of, from numerous careful observations, that the above mentioned kinds of diseases, especially continual fevers, differ so extremely, that the same method which cures in the middle of the year, may possibly prove destructive at the conclusion of it; and when I had once happily fallen upon a genuine method of treating any species of disorder, suitable to its nature, I always proved successful, (proper regard being had to the constitution, age, and other particular circumstances,) till that species became extinct, and a new one arose; when I was again doubtful how to proceed, and, notwithstanding the utmost caution, could scarce ever preserve one or two of my first patients from danger, till I had thoroughly investigated the nature of the distemper, and then I proceeded in a direct and safer way to the cure.

78. It may be observed with respect to the foregoing declaration, that, "the same method which cures in the middle of the year, may possibly prove destructive at the conclusion of it," that doctor Rush observes in a foot note that, "this remark extends to a more limited period than a whole year." But I suspect doctor Sydenham means but half a year, "from the middle to the conclusion," because, he elsewhere (see page 5 of his work) has distinguished diseases into vernal and autumnal; and, because this seems to be the import of his language. Nevertheless, this note of Rush's is highly important, as it calls the attention of the reader to a very useful fact, and one which can-

not be too strongly impressed on the mind of every physician.—The observations which are here made, by these illustrious physicians, at once prostrate every nosological system, founded on any ground whatever, that excludes specific causes. For, if it be a fact that small pox, and many other epidemical diseases are much more virulent, and require a treatment materially different, in different seasons, and this I presume most medical men will admit.—How can any exposition of symptoms which serve as the leading and distinguishing marks in general, enable us to discover the peculiarities of each season? I repeat, we can form no arrangement of signs, by which these peculiarities may be discovered—we may distinguish small pox, as a variety of the exanthemata, as partaking mostly of the synocha form of fever, &c., but still all this only distinguishes it from other diseases, and I am of the opinion that we can only detect those highly important atmospherical differences, by a vigilant attention to the diseases which have just preceded, any particular epidemic, and particularly by especial attention to the effects of our remedies, upon a disease to which we can attach a nosological character. I consider the chapter of doctor Sydenham, now under notice, of high importance, and shall, therefore, extend my extracts from it a little farther.

79. Our author continues, page 4, "and although I have carefully observed the constitutions of different years, as to the manifest qualities of the air, that I might from thence discover the causes of so great dissimilitude of epidemic disease, yet I must own, I have hitherto made no progress; having found that years that agree as to the manifest temperature of the air, have, nevertheless, produced very different tribes of diseases; and vice versa." Doctor Rush says of the above paragraph, that, "this remark is correct, and is calculated to show that epidemics depend upon a quality in the air totally different from its manifest qualities."

80. I have in some of my preceding paragraphs observed, that although all diseases arising from specific causes, are sometimes the result of a co-operation between these specific causes, and fortuitous causes—still, in all cases, fortuitous causes can act by merely increasing the susceptibility of the system, and it may safely be insisted on that, in all epidemics, the differences spoken of by Sydenham depend upon some peculiarity of a specific cause. What is the precise nature of these causes, will probably remain among the secrets of nature; but the following observations of Sydenham accord with later experience.

81. This author says, page 4, "the matter seems to stand thus: there are various general constitutions of years, that owe their origin neither to heat, cold, dryness, nor moisture; but depend

upon certain secret and inexplicable alteration in the *bowels of the earth*, and the air becomes impregnated with such kinds of effluvia, as subject the human body to particular distempers, so long as that constitution prevails, which, after a certain course of years, declines, and gives way to another. Each of these general constitutions is attended with its own proper and peculiar kind of fever, which never appears in any other; and, therefore, I call this kind of fever stationary." No satisfactory solution has yet been obtained respecting the source of febrile poisons, except in a limited degree. Whether the opinion of Sydenham be correct, that the air is occasionally contaminated by exhalations from the bowels of the earth, cannot be decided, in our present state of knowledge. Nothing within my recollection tends so much to support that opinion, as the history of the extension of the Asiatic Cholera. I will not stop here to enter into any particulars, but, although, I believe that we have the most satisfactory proof that this disease is not contagious, yet, its cause remains enveloped in great mystery—the contaminating principle is doubtless in the atmosphere; but, how is it generated or accumulated? The air must have its foreign material from some source, and as we know that malaria is generated in alluvial soils, there is reason for believing, that it is from the same source, under peculiar modifications, that we have the poisons which give rise to diseases, not generated by the ordinary and well recognized malaria.

82. The distinction which is here made of fevers, as being stationary, I apprehend is of no practical utility, in the United States, without a most vigilant attention to the changes of the weather, and to every variation of the symptoms of each epidemic; for, the whole of this chapter of Sydenham, as well as Rush's writing, and I may add my own experience, go to prove, that, so far are we from being able to prescribe with satisfaction and success, during any one general constitution, that we often find that epidemics are liable to change during the space of a few weeks, or to use the language of Sydenham, "the same disease in the very same constitution of the year, frequently appears in a various and dissimilar manner, as to the time of its beginning, state, and declention; which is an observation of such consequence, as to regulate the indications of cure."

83. (page 6) "There are also certain particular constitutions of the same year, in which, though such kinds of fevers that appear in all years, (which we therefore call intercurrents) do proceed from some one or other manifest qualities of the air; for instance, pleurisies, quinsies, and the like, which generally happen when an intense long continued cold is immediately succeeded by sudden heat. It may therefore be, that the sensible

qualities of the air, have some share in producing those intermittent fevers, which appear in every constitution of the atmosphere, but they do not cause the epidemics peculiar to the general constitution. And yet, at the same time, it must be acknowledged, that the above mentioned qualities of the air may, more or less, dispose the body to the particular epidemic disease, and the same may be affirmed of every error in the non-naturals."

84. On a superficial view, the observations in the preceding paragraph, seem to militate against my opinion of causes. Thus, Sydenham says, we must acknowledge that, that the sensible qualities of the air, as well as errors in the non-naturals, may dispose the body to be acted on by an *epidemic cause;* and, hence the language of authors in general would be, that, some remote atmospherical cause gradually assailed the system, but being unable of itself to excite disease, it remains a mere lurking foe till some error in the non-naturals, or some sensible change in the air, shall excite it into action; and, therefore, say they, the atmospherical poison is a remote cause, the sensible agent is the occasional or exciting cause; (see from 47 to 63.)

85. Let us suppose a person in good health exposed to a pestilential air; and that in a few hours or days afterwards, while pursuing his ordinary business, he finds himself affected with yellow fever, small pox, &c. It is obvious that under such circumstances the disease will be caused by, and wholly formed by the specific matter, which has been generated in the system of the individual who has been affected, with a similar disease.—Many things may, in such a case, tend to increase the susceptibility of the system; but the disease will be a genuine offspring of its parent.

86. Before I conclude my general observations upon specific causes, I wish to call the readers attention to a declaration made by doctor Rush; he says, page 40, vol. 1, of his works, "I have more than once heard doctor Huck complain, that he could find no marks of epidemic fevers in London, as described by doctor Sydenham." However correct this may be as regards the diseases of London, there is no question but such atmospherical constitutions do characterize the diseases generally of our cities, and of our country in general. And, I have little hesitation in believing, that the acumen of a Sydenham's mind, would still detect the lurking pestilence, however variable, in the air of London, which still gives more or less of an epidemic character to the diseases of every season. It would appear that fortuitous causes or the fortuitous susceptibility, (see 31,) give the leading features to their diseases, such as consumption, tabes, typhus fever, &c. nevertheless, I believe that even these diseases are more or less under the influence of seasons, and of

general constitutions of the air; and that these diseases are less skilfully managed for want of proper attention to this fact. Be all this as it may, in this country these different seasons and constitutions of seasons do exist, and are of immense importance to every practitioner of medicine. There is a remarkable illustration of this state of things in the observations upon cholera at Hamburg, reported by doctor Fricke—he tells us that in the year, in which cholera prevailed (1831) there were but six deaths by consumption, whereas, in the year preceding it, there were upwards of seventy deaths from that disease, and this disease has added greatly to the mortality in that city for many years. Such an occurrence can only be explained on the supposition, if we may not use a more positive term, that there is a peculiar atmospherical contamination which gave rise to the cholera, and excited a counteracting influence upon persons predisposed to consumption. I here terminate my observations upon the subject of specific causes for the present—and shall now proceed to offer a few reflections upon fortuitous causes. The reader is referred to some notice of causes in general, (40 to 46.) The following is the best arrangement which I have been able to make.

87. CLASS II.

Of Fortuitous Causes.

Fortuitous causes consist of the

1. Atmospherical.
2. Actional.
3. Regimenal.
4. Sensorial.

} order.

88. The atmospherical order consists of the

Calorificous.
Frigidous.
Humidous.
Aridous.

} species.

89. The actional order consists of the

Maximeous.
Minimeous.
Irrigularious.

} species.

90. The regimental order consists of the

Alimentous.
Medicinous.
Deleterious.

} species.

91. The sensorial order consists of the

Mentalous.
Sensitivous.

} species.

From the above arrangement we have the following terms, which we shall apply to fortuitous causes.

Table of Fortuitous Causes.

92.	Calorificous.	atmospherical.
	Frigidous.	
	Humidous.	
	Aridous.	
93.	Maximeous.	actional.
	Minimous.	
	Irregularious.	
94.	Alimentous.	regimenal.
	Medicinous.	
	Deleterious.	
95.	Mentalous.	sensorial.
	Sensitivous.	

96. Having mentioned four species of the atmospherical order of fortuitous causes in the above arrangement, I shall now offer a few general observations on atmospherical influences upon the human body; after which I shall explain my ideas of the terms I have adopted: and also explain why it does not seem expedient to pursue atmospherical influences any further, with our present limited knowledge of the subject.

97. *Introductory remarks on the atmospherical order of causes.*

To the intelligent reader it may seem unnecessary in the present age to take any notice of the supposed planetory influence upon the human body. I have reason to believe that a few remarks on this point may not be wholly useless, since a large portion of mankind are still believers in the ancient notions of those supposed influences.

98. It has been said by Cicero, that, "there is no nation so savage, no man so rude, as not to have some notion of the gods." And we are taught by history, that at the very remote period at which the Chaldean nation existed, men worshipped the sun and moon as their deities. And to me it seems very probable that this kind of prejudice has never been banished from the minds of any nation since. The mysterious numbers of the Pythagorean philosophy, perplexed the medical world for some time, and hence the septenary progression of fevers adopted by Hippocrates, by which he was led to place his principal critical days of fevers on the 7th, 14th, and 21st. But no sooner had Galen pointed to the quarterly lunar phases, as ruling the septenary critical days of fevers than a sect of philosophers espoused this doctrine, and this has had advocates down to the present day.

99. It seems to have been left for the otherwise learned doctor Mead, to put the finishing stroke on these solar and lunar in-

fluences. This writer displays more learning than sound medical discernment; for, who can admire the judgment of a physician who gravely tells us, that Oliver Cromwell died of fever and grief, and that these diseases are more especially under planetary influence, and that he thinks so because that notable man died during a great storm, near the autumnal equinox, and about the full moon. Indeed, the gloomy forebodings of this chapter of Mead, on those supposed *influences*, are sufficient to condemn his notions upon this subject, for modern observations teach us that no condition of the atmosphere can be so uniformly prejudicial to human health, as is there represented. The doctor tells an amusing story of a gentlewoman, known to the learned Kirkringins, "whose beauty depended upon the lunar force, insomuch that at full moon, she was plump and very handsome; but in the decrease of the planet, so wan and ill favored that she was ashamed to go abroad; till the return of the new moon gradually gave fulness to her face and attractions to her charms." Doctor Mead says there is nothing improbable in this story, because shell fish are known to be similarly affected. This prejudice is as old as the days of Hippocrates, who advised his son to study the stars, because they have an influence upon diseases; but, certain it is that we have no means of ascertaining how far the planetary bodies do influence our bodies, either in a state of health or disease, and, therefore, no practical knowledge is likely ever to be obtained from this study.

100. An attempt was made about the year 1815, by doctor Balfour to revive this doctrine, and some countenance seems to have been given to his speculations; I believe, however, few or none of the physicians in this country were brought to coincide in his opinion. If it were necessary, many objections might be pointed out against these influences; I deem one sufficient to upset all the speculations which have been offered on this subject. Most epidemics exist principally during certain seasons of the year—the yellow fever, for instance, commences usually about the beginning of July, and ceases invariably, as an epidemic, during the winter. If we may admit the influence of the planetary bodies upon the animal economy, it would be unreasonable to ascribe the whole to changes effected in the atmosphere. The atmosphere as the conducting medium of electrical, and as modifying magnetic phenomena, is liable to some very remarkable changes, notwithstanding the unalterable condition of it, chemically considered—its temperature, its elasticity, its more or less moisture, &c. are visible changes: electrical phenomena present others. Those changes may serve to modify all things in connection.

101. The next noxious power that I shall briefly notice, which has been supposed to assail the human body through the atmosphere, as a medium of conveyance, is the animacular hypothesis. To many, we are aware, this doctrine would not seem to require notice, but we are inclined to present the reader with a historical view of all the causes which have been offered, by men of learning—first, because I think it due, as a mark of respect to our predecessors—and, secondly, because we are sensible of many imperfections, and much diversity of opinion down to the present day. These are sufficient, in my opinion, to humble the most aspiring genius, into a cautious reserve how he tramples on opinions supposed to be exploded.

102. We have thought proper to copy the following observations on the subject of the animacular theory, for the January No. of the London Medico-chirurgical Review, for 1832. The remarks of doctor Johnson may be distinguished, from the text of doctor Neale, by marking the latter with quotation marks.

103. We next come, says the (London Reviewer,) to the work of doctor Adam Neale. [Entitled Reseaches to Establish the Truth of the Linnæan Doctrine of animate contagion, &c. &c. October 1831.] This is really a very curious, learned, and considering the grave subject on which it treats, a very amusing production. We mean to give some amount of it in a separate article, and therefore shall only notice, in this place, that portion of it which bears on the all-engrocing object of inquiry—cholera morbus.

104. From letters which we have recently received from several parts of the Continent, we find that the doctrine of "intro-animate pathology"—or in other words, the doctrine of epidemic diseases being the result of animacule or insects floating in the air, as being very prevalent there. In the absence of a better theory, we should not be surprised to find the said doctrine extending to this country—perhaps even before the epidemic reaches these shores.

105. It is necessary to premise, as indeed the title of the work indicates, that the theory here propounded, originated, or at least was first brought into notice by the immortal Linnæus, in a thesis of one of his diciples (Nyrande,) in the year 1575. Of these doctor Neale has given us some amount. The following extract will convey some idea of their animalcular doctrine.

106. "Contagious diseases then, for the most part, all coincide in this peculiarity, that they are attended with exanthematous eruptions, either externally or internally, in so much that even hydrophobia is said to produce certain pustules under the tongue; so that in all contagious maladies, there exists a certain exanthematous matter, the eruption of which usually mitigates

the febrile symptoms; that the presence of the matter excites bodily uneasiness of hot feverish actions, and that, even in its mildest form, the disease is exacerbated at some certain hour of the day, or towards evening, That the power of the disease is increased by *sweet articles*, but diminished by *bitters*, and that the irritation is excited by fat articles of diet. That it is somewhat repelled by cold, but like every thing animate is cherished by warmth, although it appears to be expelled by great heat; thus, from the application of heat, the itch and every exanthema is augmented, and from increase of heat and fever driven outward to the warm surface of the body. That they are destroyed by anthelmintic medicines, and therefore sulphurous remedies cure the itch, and thus mercurial medicines, (as they are destructive to nearly all insects,) cure both the itch and syphilis, and prove preservative both from the plague and small pox. And that as tobacco kills all minute insects, fumigation with it prevents contagion. That both analogy and the sense of itching in the pustules of contagious diseases, seem to warrant the same inference. That both in itch and dysentery, the existence of small insects has been the subject of ocular demonstration. That Langius had observed them in measles; and Kircher in plague; Hauptman in syphilis (animàlcules resembling slugs;) Zeigler in petechiæ; Lucetanus and Parcellus in small pox, and that the last mentioned had observed also worms in serpigo, and other cutaneous diseases.

107. Both from analogy therefore, as well as from experience acquired, we may very easily believe that very minute insects of that kind, such for instance as Acari of various species, may be the cause of several contagious diseases. Nor is their size or structure repugnant to such an idea—since there are animacules so minute that the human eye unasisted by the microscope, cannot even perceive them. The lynx-sighted Lewenhoek observed thousands of insects, (or animacules more properly speaking) which added together scarcely equalled in size the hundredth part of a grain of sand, and even in these fluids which to the naked eye seem altogether pure and diaphaneous. While the accurate and ingenuous Reaumur has stated it to be his opinion, that the obscure vapor which sometimes darkens the atmosphere in summer, is nothing else than myriads of insects, so minute, as entirely to elude human vision. And the same naturalist has demonstrated, that these do not exist separately only, but also congregate in societies similar to bees and ants, and that these also observe among each a regular order.

108. From any evidence of our senses, therefore, we must draw no argument, as to the impossibility of the thing; for the divine Providence of the all-wise Creator of the universe is

equally manifested in the most minute, as well as in the greatest of his arrangements. While we inspect a living acarus, we feel assured that, minute as it is, it is provided with muscles, nerves, veins, arteries, and viscera; and that all these however small, are yet adapted to contain the most subtile fluids, calculated to circulate through them; all this too we are perfectly warranted in believing. Whence these animalcules shall have proceeded we may well wonder, but we are scarcely warranted in that wonder, if at the same time we but think that these being of such very minute proportions, that they hardly exceed in size the atoms of the atmosphere, can yet fly through and seek out the most minute chinks, exactly as in the same way as mucor arises constantly from its seeds, sowing themselves wherever any putrid matter shall exist in a state fitted for their reception."

110. Having very ingeniously applied his animalcular doctrine to various diseases, as scabies, dysentery, whooping-cough, small pox, measles, plague, and syphilis, of which we shall take due notice in the promised analysis, we must here take a long leap, and come to cholera. Previously, however, to this, we shall probably be pardoned for introducing some consolotary considerations that may, in some degree, reconcile us to the sweeping pestilence that is approaching our shores. It appears that early in the fourteenth century, a plague ravaged Europe, taking its origin in Asia, and *destroying only two thirds of the human race!* It commenced in Cathay, (upper Asia) in 1346, "from a most filthy smelling vapor, supposed to proceed from a certain fiery body which fell down from the atmosphere, or was eructated from the earth." This vapor consumed all that stood in its way—animals, houses, trees, &c. for the space of fifteen days journey in every direction.

111. "*And some most filthy little beasts furnished with feet and tails,* as also worms, and a small sort of snakes in a numberless multitude, fell at the same time from the atmosphere upon the earth, the stench and putrefaction from which, infected the very air, and all the regions circumjacent. A pestilence having arisen from thence, spread around, depopulating the whole of Asia, and afterwards Egypt, Greece, and Italy. Thence it passed into France, Spain, and England; and at length into Germany. In the city of Florence alone, Valarius says there perished 60,000, but St. Anthony says 100,000. Many prodigies are said to have preceded this plague in Asia, such as horrible gulphs opening in the earth, exhaling a poisonous vapor, &c. (kircheri scrutinium, &c.)"

112. Dr. Neale says that these "filthy little beasts" could have been no other than, "the rat-tailed larvæ of a species of fly, which inhabits cess-pools, and is known to entomologists by

the name of *Eristalis tenax.*" That these larvæ do sometimes appear in most extraordinary multitudes, the doctor can vouch, from what took place at Edinburg in 1790, when he was a pupil at the high school there. We shall give his record in the author's own words.

113. "On a sudden one day, there broke forth a swarm of these larvæ from some humid vaults that were connected with the necessaries, and the dissecting rooms of the late doctor Monro, the second of that name. These countless myriads proceeded, marching like an army down one of the wynds, or long alleys leading into the Cowgate, and having nearly reached the south bridge, turned on a sudden to the left, and proceeded along a rising street to the north, leading towards Hunter's square, and the Iron church, where their career was terminated by the multitude (with staves and stones,) who came out to gaze upon such an extraordinary spectacle. The march of this larvæ continued, to the best of my recollection, for at least three days, and their numbers must have exceeded many millions; their line of march extending nearly to a quarter of a mile, from the back of the new college to Hunter's square. Many persons must now be living who can remember to have witnessed this phenomenon."

114. We do not wonder (says the Reviewer,) that our northern neighbors should have been energetic in the construction of a "new town," where water clossets, and public sewers might supersede the domestic bucket and cess-pool! But to return from this digression.

115. The plague of insects occurred in China in 1347, while Edward the third ruled in England, and various epidemic diseases soon prevailed over Europe, ending in a real plague. In London, such was the mortality that 50,000 bodies were interred in one week. The deaths at Norwich were nearly as numerous. Venice lost 10,000 people. Lubeck 90,000—while the deaths in Spain are said to have amounted to the incredible number of 20 millions!! In the following year the pestilence was still raging in the South of Europe, as well as in the North. In Denmark it assumed a novel form and was called the "*sorte diod,*" or black death. The author strongly suspects that this is the disease now or lately raging on the shores of the Baltic, under the name of Cholera. In 1358, Florence lost 10,000 citizens, as stated by Buccace in his wonderful description of that calamity. Petrarch asserts that very few escaped the malady.

116. Dr. Neale comes to the subject of Cholera, "now frightening our Isle from its propriety," and threatening devastation to the people. A consideration of phenomena, doctor A. thinks will induce us to conclude that, "the efficient cause or contagion of Cholera acts, in the first instance, on the brain and ner-

vous system—just as the venum of the Cobra de capello and the rattle snake, or any other deadly poison:—*that it is contained in the atmosphere*—enters the haman body most probably through the nostrils, which are always open, and is applied immediately to the brain, by means of the extremities of the olfactory nerves, upwards through the cribiform plates of the ethmoid bone." The same might be said of typhus and many other diseases. The following passage from the Englishman's Magazine, is worth quoting.

117. "The entrance of the epidemic into Orenburg, took place on the 26th of August, 1829, and its approach was attended with some extraordinary circumstances, which tend strongly to support the train of reasoning pursued in these researches—"During the summer of 1830, the Tartars who frequent Moscow for purposes of traffic, predicted the approach of a pestiferous malady, which, however, the inhabitants, relying on the local advantages of their city, would not credit. Suddenly, however, the atmosphere was filled with dense masses of *small green flies, which in Asia are the forerunner of pestilence, and are called plague flies.* The streets swarmed with these insects; and as soon as the inhabitants quitted their houses they were covered from head to foot. *For a time, however, no attention was paid to this phenomenon,* nor were any preventive measures against Cholera even thought of until intelligence arrived that this formidable disease had appeared in Nischid-Nowgorod."

118. We do not deem it necessary to pursue these quotations any further, and we trust our readers will excuse us for pursuing it thus far. We trust we may look for forgiveness, for being a little in the excursive mood in writing for our Journal. It may not be amiss to journalize our accounts current, as we pass on; but we should be more select in carrying into our legers.

I scruple the less about dwelling a littte on this, almost exploded doctrine, because it has relation, in the present instance, to Cholera—and since we are assured by doctor Johnson, that the doctrine has its followers in Europe, we have thought a brief review of some of the leading circumstances might be useful, since, we believe that it is only necessary to look dispassionately on the facts alledged in proof, to see the fallacy and the absurdity of attempting to benefit medical science, by dealing in the marvellous, and the obscure.

119. Our author, (paragraph 106,) sums up some of the most striking facts, which he thinks go to establish his theory—most epidemics are attended with exanthematous eruptions—What has this to do with animalculæ? Certain authors long ago, when medicinal philosophers were mad in microscopic speculations, saw animalculæ in the "measles, plague, syphilis, petechiœ,

small pox, serpigo, &c. What has become of these animalcules in more modern times? Could not doctor Neale see them, and not take it second handed, after generations have passed away?

"The pressure of the matter excites bodily uneasiness of hot feverish actions," and it is exacebated towards evening. What has this to do with animalcules? We know nothing of their habit. What shall we infer from the fact that eruptive diseases are increased by sweets and made better by bitters—if we admit the fact to a limited degree, what has this to do with animalcules? But I forbear to pursue this less than ignis fatuus of medical science, and shall conclude my remarks with a brief notice of one or two of doctor Neale's facts. Small green flies were seen, we are told, at Moscow; and, myriads of larvæ were seen at Edinburg; but, what has this to do with epidemics?—doctor Neale does not ascribe the Cholera to the production of these flies in the human system, and he does not allege any evil to have arisen from the phenomenon at Edinburg. The truth is that it has long been known, that the atmosphere which is deleterious to the higher animal existences, is the proper pabulum of vegetables, and of many of the lower orders of animals. Hence it is, that, doctor Lind and others, have observed that the presence of musketoes in abundance, is a sign of a sickly atmosphere—where the carrion is there will be the buzzards! Where there is a sickly atmosphere there will be the proper medium for many insects and animalcules, but can we with propriety draw the inference, that because these things are simultaneously present, (and that only at times, to the best of our belief,) we may conclude that here is a cause and its effects? Has not the Cholera traversed a large portion of Europe, and have we not seen it without the "green flies?" We pity the intellect that is content to dwell amid material so murky, so unprofitable, so little susceptible of proof, and, indeed, so contrary to almost every thing that is well established in medical science. This attempt at the revival of an exploded doctrine, if it deserves so respectable a name, reminds one of some of Darwin's speculations, which have always led me upon their perusal to the conclusion, that the doctor did not believe what he advanced, and indulged in attempts at palming opinions on others, by his ingenuity, which he might attempt because others were less deep-sighted than himself.

120. In concluding, I may safely say, that nothing is known on this subject that can be applied to any practical purpose.

121. Another hypothesis has engaged the attention of some very learned physicians, in which they have attempted to prove, that our diseases are excited, and governed in their laws by elec-

tricity. I believe I am correct in saying, here, that nothing has yet been offered to the profession, of much practical importance, although the subject has been carefully investigated by many very able men. Electricity, like the planetary bodies, seems to be entirely beyond our comprehension, as respects its properties and laws, as they stand related to the treatment of diseases of the human body; and it does not appear likely that we shall ever be able to trace so subtile an agent through even a few of its multifarious hidden recesses. If we could, it does not seem probable that this single agent, however powerful and terrible, it may appear in its atmospherical gambols, can have much share in the production of diseases, evidently formed and governed in their laws by chemical agents, the product of marshes, or of animal secretion.

122. On the contrary, it is more reasonable to attribute the occasional purification of the atmosphere to sensible electrical phenomena. So that I am of the opinion that if these electrical influences are ever successfully explored and explained, they will be found merely incidentally injurious, and will, therefore, be found operating only as fortuitous causes. Endeavors have been made lately to deny the influence of the long acknowledged, malaria, and to ascribe bilious diseases to the presence of water, and the disturbances, which they suppose to exist, in the electricity of the atmosphere.

123. By reference to paragraph 87, &c., it will be seen, that I have mentioned four orderal terms, each of which includes different species or conditions of the agents, that are put down as orderal. First, we have the word *calorificus* (heat, or that which produces it,) as the foundation of the specifical term *calorificous*, (88 and 92) used to designate a state or condition of the atmospheric air, which is not only discoverable by the thermometer and our perceptions, but always more or less under our control, at least in our chambers; and, although this state of the air as discoverable by the feelings, is but relative, within certain bounds, still the air must always be within certain bounds, or it may excite disease; and we may observe, that the effect of a given quantity of heat is by no means at all times governed by the actual quantity present, but is more frequently rendered injurious by the suddenness with which it is augmented, and especially when applied to persons long confined to a cold atmosphere.—And hence it is, that, pleurisies and other inflammatory diseases, prevail during sudden changes of temperature in the air in spring, after severe winters.

124. Secondly, from the word *frigidus*, (cold,) we derive the specifical term *frigidous*, this being nothing more than the absence of the other condition, mentioned in the preceding para-

graph, it will not seem strange that the same remarks apply to its consequences, when it operates injuriously upon our bodies. Thus, the sudden abstraction of heat from the air as often produces disease, as the sudden augmentation of it, but, still, this comparison of their effects, is to be understood as holding good to a certain extent only. For, while the long application of heat, independently of a contaminated atmosphere, produces, what is called a bilious habit, and a general relaxation and langour, which operates as a powerful mean of creating a susceptibility to miasmatic diseases; a long exposure to a cold atmosphere, raises a high state of susceptibility to scurvy; and the sudden transitions from the warmth of our autumnal days, to the chilling cold of winter, subjects us to fevers verging to typhus, which are both obstinate and dangerous in their career. The sudden transitions of temperature in the United States generally, is a fertile source of disease. We have observed, what indeed is well known, that in the northern parts of Europe, confining our remarks to latitudes below sixty, the changes of temperature are by no means so considerable as in the greater part of North America. We have seen, in the north west part of Germany, perhaps ten changes in twenty-four hours, from rain to sunshine, and scarcely any change of temperature was perceptible to one's senses.

125. Thirdly, from the term *humidus*, (wet, or moisture,) we have the specifical term *humidous*. It may be remarked of this condition of the atmosphere, that it is known to be unfriendly to many asthmatic persons; and it is very obvious to our senses as seen upon our furniture. I shall endeavor hereafter to prove, that this state of the atmosphere is powerfully influencial in the production of epidemic diseases. And being discoverable by proper instruments, and in some measure under our control, at least in our sick chambers, we shall, therefore, in due time, resume the consideration of this interesting subject.

126. Fourthly, from the word *aridus*, (dry) we obtain the term *aridous*. And I need only remark here, that, this stands pretty much in the relation to the *humidous*, as the term *frigidous* does to the term *calorificous*, being in good measure the absence of the *humidous* condition. I shall endeavor hereafter to investigate this subject more fully, and, I trust, some practical information may thence be derived. For I have no doubt but that this condition of the air is frequently prejudicial, but like its opposite, it is in some measure under our control in our chambers.— I shall here terminate my remarks upon the subject of atmospherical influences for the present, by summing up, in as few words as possible, the amount of all I have said concerning it. The four conditions, *calorificous*, *frigidous*, *humidous*, and *aridous*, are all evident to our senses, subject to control in the chambers

of our patients, and often of primary importance in cases where we are consulted, as to the removal of patients, from one place or country to another, and I am inclined to believe, they are the only atmospherical influences worth our serious attention, except perhaps, the weight of the air.

127. My orderal term actional, it will be obvious to all is derived from *actis*—and however numerous the significations applied to the word action in the English language, the specifical term connected with it in my table will show, that, I mean by the term actional some action or service performed by the muscles. This condition of our nature has much connection with health and disease, but I shall not stop here to point it out, it being my purpose at present to give a very brief exposition of the meaning which I attach to the terms I have chosen.

128. It will obviously appear that, I derive my specifical term *maximeous* from *maxime* (most or greatest,) but no word occurs to my mind of the precise meaning I wish to convey, and therefore, this term is in some degree arbitrarily applied. I mean by it an excess of action, or too long continued exertions, whereby they are rendered injurious. This condition holds a conspicuous place among fortuitous causes. For, besides the constant liability to injury from this source in the various vocations of life, the sensualists, the mechanic, the sportsman, and sometimes the boy at play, are brought to suffer from over exertion, and in all the cases, the action may be said to be in a state of *maximum*. But still the effect will not be in exact proportion to the quantity or amount of force, for as applied to a living body, its effects are relative, that is, the same force will operate with vast difference on different persons, or on persons in different circumstances.

129. The specifical term *minimeous*, derived from the word *minime*, (least,) does not in its common acceptation convey the precise meaning I wish, but as the word *minimum* has been understood to mean a state of reduction, in chemical language, I trust, it will be sufficiently significant of my intention. I mean by this term a condition of the muscular system below what is necessary for the maintenance of health. I must waive the further investigation of this subject for the present—I have only to say that however numerous we may find the injuries from the *minimeous actional* state of life, we shall find the minimeous much more injurious, and often laying a foundation upon which the former may operate with great facility and effect.

130. The term *irregularious*, needs no explanation as to its derivation, but being compounded of the two conditions mentioned in the two preceding paragraphs, it will be seen, on a slight view, that I might have dispensed with this term, and explained all my views upon the actional conditions, under the two

extremes of excess and defection of action, but on a closer examination, it will be found that there are many of whom it would be difficult to say to which actional condition they belong. For such is often the conduct, as governed by every whim of the moment, that they are always in extremes.

131. Next in order I have to speak of the orderal term *Regimenal*—by this term I wish to designate all such articles as are taken into the stomach, with a view to their nutricious properties, or to gratify the appetite. This will be found to embrace a vast number of dissimilar articles, and is a prolific source of disease, notwithstanding that it should be the source of sustentation alone. All articles, however, which may properly be placed under the head of *regimenal*, may be reduced to three varieties, of which I shall now give some account.

132. First, the term alimentous may serve to designate the first. It may be remarked that even in the use of articles in this class, much evil is produced in various ways, of which I shall speak hereafter—so much has this been the case, since the days of the Jewish lawgiver, that gluttony was considered a serious offence in the eye of God. It may not be amiss to observe further, that articles in this class offend in *quantity* and *quality*. It has been remarked by doctor Mead, that over-eating is equally injurious as spirituous drinks, and he pronounces it a prolific source of disease.

133. We need not stop to give the derivation of the term *Medicinous*. I have only to say that all articles that have the sanction of experience as to their being really medicinal, when given in proper quantity, are in my view *medicinous*. But it is obvious that such articles are to be adapted with skill and care to the various and varying conditions of the human system, or they may become highly deleterious, and hence the reason of their frequently becoming causes of disease; and how very extensive a source of disease we have from this source, I shall endeavor to show in proper place. We may readily perceive that there is but little difference between things that are medicinous, and those that are deleterious—this is so nearly true, that the same articles become medicinous, or deleterious, accordingly as they are proportioned and suited to the state of body present at the time of their exhibition. And consequently, that articles may be made really medicinal, they must be very precisely suited to the condition present, as well as to the idiosyncrasies of the individual. And as this requires an amount of vigilance, and a pre-eminence of skill which but few physicians possess, or are willing to bestow, I feel no hesitation in saying that immense mischief is done every day, by what is considered medicinous,

but which, in many cases for want of care or skill, are rendered deleterious. It will be seen with how much caution we should act wherever we do not see clearly some indication, for such remedies as we may recommend to our patients. The anxieties of patients, of friends, and of physicians, is often too great, and articles are given pell mell, rather than do nothing.

134. The word deleterious requires no definition, but it may be proper to observe that I wish to include under this head all articles positively prejudicial in themselves, as well as such as are rendered so by the improper use of them. The extensive scope which this term is allowed here, will bring a very great number of articles on my list of the *deleterious regimenal* causes of diseases. But for the present it is sufficient to observe, that all the causes under the heads of *alimentous*, and *medicinous*, are readily convertable into the *deleterious*, but being only incidentally so, there is still a manifest difference between things that are *alimentous* and *medicinous*, from those that are *deleterious;* in due time I shall endeavor to show, that each of the three kinds of *regimenal* causes are really distinct, and admit of important practical instructions being given under these several heads; and have further to remark that as not one of these noxious powers now in view, ever produce any consequences of uniformity of appearance, in a pathological view, we must consider them in the light of fortuitous causes. For although we know that arsenic, for instance, acts principally on the stomach, still there does not appear to be any material difference between inflammation from arsenic and that produced by other causes; neither does their appear to be any absolute difference between convulsions existed by opium, and those excited by other causes.

But on the contrary, those noxious powers enumerated (53 to 58,) always excite one certain disease, and no other; whereas, a single article in the *regimental* causes may excite different diseases, as an erysipelas in one, a palsy in another, a diarrhea in a third, hepatitis, &c. &c. in others. Here, then, we recognize a well marked difference between fortuitous and specific causes.

135. It remains to speak of the orderal term *sensorial*—by this term I mean nearly the same thing which is generally understood by the term *excitability*, but not precisely the same, for I shall endeavor to show when I come to treat of animal life, that the term *excitability* has been used in a very indefinite sense, and, indeed, according to Rush and Brown, it seems to mean any thing, or rather nothing; for, that there exists a living property or condition upon which impressions can be made, by what are termed stimuli, except it be upon a living susceptibility, is what I can not comprehend. It, therefore, follows that I mean by the term *sensorial*, a principle of life which forms, guards, and

regulates every organ, and every movement of the body—maintains our existence in sickness, and in health; and is, one word that without which the living phenomena cannot exist; and it serves to form and sustain our bodies. It has been said to be a mere effect of a certain association of matter, but to the best of our apprehension it sometime ceases to exist, while we can detect no organic lesion whatever. All the different articles or agencies which may annoy the body through the sensorial power, may be conveniently arranged under the head of *mentalous* and *sensitivous;* and these terms which I have put down as *specifical,* I shall now proceed to notice.

136. It will readily be seen that the term *mentalcus* is used to signify agencies which operate upon the body, through the medium of the mind, and it is well known that the operations of the mind, particularly when irregular or excessive, may produce disease. Thus a person in perfect health meets with something that excites excessive fear, and although the object may be at some distance, violent disease may be excited. It is evident in these cases which may occur from similar agencies, as anger, jealousy, and the like, that the disease may be produced by an act of the mind upon the *excitability,* or what we may term the sensorial power. Therefore all disturbances of the mind which excite bodily disease, are *mentalous sensorial* causes of disease.

137. The word sensitivous is but a different termination of the word *sensitive,* which I chose to make for the same of uniformity in my terminations; I mean by the term *sensitivous,* what is understood by *sensitive,* "having sense without reason." For instance, we are liable to suffer from casualities, as wounds, burns, the bite of animals, and the like. In these cases the sensorial power is operated on by mechanical bodies, and the mind can only suffer sympathetically therefrom, and hence the obvious difference between *sensitivous* and *mentalous* agencies in their operations upon the body. A slight view will convince us that a vast number of things may be placed under the term—*sensitivous sensorial.* In concluding here, I may remark that it is to the sensorial power we owe, in a physical sense, our existence and we may say—by it we live, and move, and have our existence.

141. After all I have said respecting the terms applied to fortuitous causes in my table, I am by no meaus desirous of establishing any new technical language. I have not used these terms for the sake of novelty, but because on careful reflection I have thought such an arrangement may be made useful in the investigation of the subject of fever. I hope the convenience which will result from arranging fortuitous causes under a few significant heads, and treating of them systematically, will com-

pensate for a little trouble in examining my definitions, and render what I have to say of causes in general more susceptible of retention in the memory, than the desultory method usually adopted. In a word, the terms which I have adopted will serve as significant heads for the remarks I shall select from favorite authors, and from my own observations.

142. I have delivered some introductory remarks upon atmospherical influences, upon the human body, 102, to 107, in which I have attempted to give some reasons why it does not seem probable, we shall ever be able to pursue planetary, animalcular, or electrical influence, to any practical advantage. These introductory remarks, in good measure, redeem my promise of showing why it does not seem expedient to pursue atmospherical influences any further, with our present limited knowledge, of the subject, 101. But in order to give my reasons more fully, I shall resume the examination of this matter by taking a short view of the atmosphere itself. In doing this I must take occasion to state as my opinion, that although I have no satisfactory information to offer respecting the influence of the weight of the air, by which property it may become the cause of disease in one case, and a remedy for persons in certain other circumstances, that, still, it merits the most serious attention.

143. Among all the important chemical discoveries which have justly given splendor, and a high destiny to the science; and added imperishable lustre to the names of a Lavoisier, a Priestly, a Davy, and many others, nothing, in my opinion, bespeaks more strongly the wisdom and goodness, which contrived the whole chemical arcana, than the uniformity of the condition of the atmosphere, as respects its necessary component parts. The most accurate chemical experiments go to prove that, there is almost no variation in the proportion of oxygen and azote, in the air we breathe. In the 4th volume of the New York Medical Repository, we are told, that experiments made in the pit of a theatre, and in the cells of hospitals, in Paris, discovered almost no difference between the air of these places, and the common atmospheric air of the neighbourhood; so little, indeed, was the difference as to be inconceivably small. These experiments have been confirmed by Mr. Davy, and also by Dr. Seybert of Philadelphia. This fact being sufficiently established, it follows, that, all noxious things existing in the common air, are but incidentally so; and I think it is also pretty clear, all extraneous things, which are occasionally in the air, have a specific influence, upon the human body; so that all changes, that are cognizable to our senses, are referrible to the list of fortuitous causes.

144. The next thing which presents itself, to my view, is the weight of the atmospheric air; but my information on this subject

does not enable me to point out any thing of practical use. It is well known that the barometer indicates considerable variations in the weight of the air, while placed in the same situation; and we are aware, that, the surface of the human body sustains a prodigious weight of air at all times. But, in as much, as the changes indicated by the barometer, are not sufficiently understood as they are varied by climate, latitude, or season, and the like; it does not appear likely, to me, that, any thing important can be said, on this subject, in our present state of knowledge. It is true, we owe our respiration, in one sense, to the weight of the atmosphere; but the changes of ponderosity, as indicated by the barometer, depend upon a condition of this fluid, which, we can neither foresee, control, or account for.* We know that by ascending, by means of mountains or otherwise, we can pass into an air, which is lighter in proportion to our ascent. And the day may possibly soon arrive when the physician can turn his attention to these changes, as a remedy against diseases. For, whatever may be the cause of expirations of air from the lungs; its weight and elasticity are the conditions of it, by which the lungs are expanded. I have neither room or leisure, at this

*It may not be amiss here, to notice an observation recorded in Dr. Rush's account of the climate of Pennsylvania, respecting the barometer, which, differs from the notions commonly entertained about the changes in the weather, as indicated by this instrument. He says, "Mr. Rittenhouse informs me, that long and faithful observations have satisfied him, that the alterations in the height of the mercury in the barometer do not *precede*, but always *succeed* changes in the weather." If this be true it must cut up all hope of using the barometer as a means of foretelling the changes of the weather, and, consequently, all hope of obtaining any practical instruction, from the study and application of this instrument. But notwithstanding the great accuracy of this gentleman's experiments, and observations, generally; it seems probable that he has committed an error here, and that the opinion generally held is more correct. And, if I mistake not, Mr. Rowning explains this matter satisfactorily, without any immediate allusion to these opinions of Mr. Rittenhouse. He tells us, that, previous to judging of the state of the barometer, we should always shake the tube; for in consequence of some kind of adhesion or attraction between the mercury and the glass, the height does not correspond with the weight of the atmosphere till some time after the change has happened; but if we shake the instrument we, thereby, destroy this adhesion, and the mercury falls, or rises, instantly to the proper level. Now, I have no doubt but this tardy motion of the mercury deceived Mr. Rittenhouse; for, if Mr. Rowning is correct, we can easily understand why the former was led into error, seeing that the changes of weather may occur before the mercury disentangles itself from the sides of the tube; and, therefore, he might have been led to the conclusion, that, changes of the weather preceded those of the barometer. I must repeat here, if Mr. Rittenhouse be correct, we may lay aside this instrument altogether in our attempts at prognostication.

time, to prosecute this subject; but I hope to rouse the attention of some enterprising physician. And who knows but an exposure, in a situation, which would oblige consumptive persons to breathe an air accommodated to the condition of the lungs, might have a salutary effect; for certainly, we could hereby exercise the lungs, more or less, as the case might require. If we might presume to judge from the punctilious uniformity of the constituent parts of the air, we would be led to conclude that, change of weight, which is well known to vary with the height, of any given atmospherical column, that however little power we have over the first condition, the second has been left, in some measure, under our control. Who knows but by descending deep into the earth we should obtain an influence upon consumptives; and upon febrile patients: or, that, elevating them to great heights might not have a friendly influence, upon the system, provided the remedy was judiciously applied, to the stage, and force of the disease. Dr. Rush in his introductory lecture on the influence of physical causes, upon the moral faculties, has the following sentence, which, I beg leave to recommend to notice, although it is applied to another subject; for, if the mind is thus influenced, why may not the lungs also? seeing, they are the organs, which in an especial manner, govern or support the mind, of which we have ample testimony, in the extraordinary effects produced upon the mind, by inhaling the nitrous oxyd gas. "Great height has produced in several instances, uncommon activity in the intellectual faculties. An ingenious foreigner lately informed me, that he had once conversed with a man who had spent several hours upon the summit of the steeple at Strasburgh, who told him that his mind, while there, was overwhelmed by the variety and originality of his thoughts. We have heard much of the pleasure which many persons have felt in traversing the upper regions of the air in a balloon. It is to be lamented that they have neglected to record, at the same time, the influence of this new situation, upon the operations of the mind." And on the same page the doctor gives us this beautiful extract from the works of the Abbe Spallanzani in which he describes his feelings while seated on the summit of mount Ætna. He says, "Seated in the midst of this theatre of the wonders of nature, I felt an indescribable pleasure from the multiplicity, and beauty of the objects I surveyed, and a kind of internal satisfaction and exultation of heart. The sun was advancing to the meridian unobscured by the smallest cloud, and Reaumur's thermometer stood at the tenth degree above the freezing point. I was, therefore, in that temperature which is most friendly to man, and the refined air I breathed, (as if it had been entirely vital) communicated a vigor and agility to my

limbs, and a *life* and *activity* to my ideas which appeared to be of a celestial nature."

145. If elevated situations operate agreeably upon the mind, I think, we must ascribe these intellectual operations to a difference of the process of respiration; and if we can thus vary the process of breathing, does not a hope arise, from the circumstance, that by descending into excavations of the earth we should, thereby, obtain an extensive command over the lungs. So much am I inclined to believe this subject will hereafter be prosecuted, to some practical utility, that I beg leave to recommend it to serious notice. A few cautious experiments might be made, on consumptive cases, without risk, and with little trouble or expense. I hope to see the day when my country shall view this matter as worthy a national concern. There would be no great difficulty in procuring a difference, in altitude, of several hundred feet; and when we take into view how rapidly the weight of the air decreases upwards, we see what vast changes we could hereby effect upon the organs of respiration in a state of debility.* We may remark further, that, by varying the altitudinal situation of our patients we should, often, gain an additional advantage from getting them into a dryer, or more wet atmosphere; or into one of a different temperature, and thereby not only avoid the occasional injury from these conditions of the atmosphere, but, often, have it in our power to use them as remedies against consumption, and other diseases.

146. I might dilate my observations upon the atmospheric air to the extent of volumes, but as I have no room for further examination of the subject, I shall conclude by pointing out a few phenomena, belonging to this parent of organization and life. See the innumerable creatures throughout animated nature, who, inhabit the waters, the earth, and the air—go to the strawberry plant of St. Pierre, and behold the endless tribes of insects

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*We have reason to believe, the Tower erected in the second age of the world, in the plain of Shinar, was of stupendous height; and although we are told the confusion of tongues was specially inflicted, in consequence of the impiety which led to the project, still I hope there is no impiety in supposing, that, their affliction was affected by physical means. And, it seems to me probable that, by inhabiting very high situations, we might not only change the labor of the lungs, but, by long continuance, we should undergo mental changes. It is a common remark that consumptives are generally insensible to their danger till a very advanced period of the disease; and we are told by Dr. Rush, that he never met but one man; who, unequivocally, said he was in a consumption. Does not this state of misapprehension arise from some defect in the organs of respiration? But as this is a subject not within the scope of my groundwork, I must withdraw my attention and proceed on the course I have marked out.

which gambol in the air—hear the sounds arising from its vibrations in gentle sighs from the venerable pine of the forest; or the cooings of the dove—hear its tumultuous roarings amid the raging billows of the deep—the myriads of harmonic sounds from the harp, and numerous other stringed instruments, the organ and other wind instruments, which, for diversity of tone, and beauty, seem to mock even science itself. Look, and see, the orb of day passing his rays of light through aeriform space, and kissing the atmosphere as she gently throws his rays askance; come muse over the phenomenon, that, almost from pole to pole, this second parent, of organization and life, displays to man her charms, and feeds him, in every clime, with the precious main spring of life. But, here I must pause! oh! FATHER of LIGHT! how shall I learn to admire, adore, and praise, thy unfathomable wisdom in forming an atmosphere!

147. I shall dismiss my remarks upon the atmosphere by the following sublime ideas of the great Lavoisier. "Organization, sensation, spontaneous motion, and life, exist only at the surface of the earth, and in places exposed to light. We might affirm the flame of Prometheus's torch was the expression of a philosophical truth that did not escape the ancients. Without light, nature was lifeless, inanimate, and dead. A benevolent God, by producing light, has spread organization, sensation, and thought over the surface of the earth." I have only to add without air there is no animal life.

ART. XV. *Abre'ge' Pratique des Maladies de la Peau, d'apres les Auteurs les plus estime's, et surtout d'apres des Documens puise's dans les Lecons Clinique de M. le Docteur Biett, Medecin de l'Hopital St. Louis. Par* A. Alphée Cazenave, *et* H. E. Schedel, *Docteurs en Medicine, Anciens Internes de l'Hopital St. Louis, &c.* A Paris, Chez Béchet, Jeune 1828. [*Taken from the London Medico-Chirurgical Journal for* 1832.]

The practical object of classification in diseases, is, by their judicious assortment, and lucid arrangement into small groups, to facilitate their study, and by one common nomenclature founded on accurate and definite descriptions, to enable all to understand more intelligibly the same affection by the same term;—its more philosophic design is to shew the affinities of the several diseases amongst themselves, and of the groups with each other, in order to lay down general rules for treatment, and to endeavour (as in natural science) to discover the general laws which influ-

ence morbid action. That classification can be alone correct which results from the careful observation of the symptoms of each disease during its whole course, the accurate examination of the changes discovered after death, the comparison of these among themselves, and the grouping together of those diseases which in all material points agree with each other.—The proximate causes of diseases are so little understood that it is dangerous to build even a part of a classification on any theoretic explanation of them; and on looking back to the various nosologies that have been produced, this reliance on theories rather than on facts, together with deficient pathological knowledge, will be found to have been fruitful sources of error. The Nosologia Methodica of Sauvages, published in 1762, was the first attempt of any magnitude at the general arrangement of diseases;—it was a laborious production, the result of great personal experience as well as extensive reading. If morbid anatomy had then been cultivated with the zeal and success which has attended its more extended and useful cultivation of late years, Sauvages would hardly have placed hydrothorax in his class "Anhelationes," and separated opthalmia from the phlegmasiæ, placing it in the 7th class "Dolores." If Cullen had not left the safe path of accurate observation, and bent his facts to his peculiar theories, he would hardly have placed diarrhea and diabetes under spasmi. Some physicians have objected to nosologies, but their objections can alone apply to those founded on theories. The advantages of a classification, the result of close and accurate observation, are exhibited in a strong light in the system of cutaneous diseases by Willan. Previously to the publication of his work no diseases were surrounded with so much obscurity and less understood; which was the more surprising from their affording better opportunities of investigation than any other classes of morbid alterations, as both the senses of vision and touch can be immediately brought to bear on their elucidation. The different significations attached to the word "lepra," are examples of the obscurity and confusion arising from the loose and inaccurate definitions of the primary forms of eruptions which were the great obstacles to the attainment of any clear knowledge of cutaneous diseases: thus, it has been applied to a tuberculous eruption, the elephantiasis of the Greeks; to a chronic enlargement of the subcutaneous cellular tissue, the elephantiasis of the Arabs; to a circular squamous disease, the lepra vulgaris; and to a union of many eruptions, as eczema, psoriasis, and lichen. Willan founded his system on the primary forms of cutaneous diseases, and commenced by giving a precise definition of the forms he applied to them. His eight orders of Pa-

pulæ, Squamæ, Exanthemata, Bullæ, Vesiculæ, Pustulæ, Tuberculæ, and Maculæ, were so named from distinct elementary lesions, and subsequent experience has proved that, although some alterations can be beneficially made in the details, the general plan is, both as it regards facility of study and precision, the best that can be adopted. Alibert in France brought out his classification eight years subsequently to that of Willan; it was founded on that of "mercuriali," in a work "De Morbis Cutaneis," &c. published at Venice in 1572. Alibert commences by dividing, first of all, cutaneous diseases ("dartes,")—he subdivides these into species and varieties: thus, if there is a scaly eruption on the body, he names it "dartre squammeuse;" if it is attended with a serous exhalation, or is of a circular form, he adds to "dartre squammeuse" either the term "humide" or "orbiculare," indicating the variety. Besides five species of "teignes" and seven "dartres," he separately describes "pliques, ephelides, cancroides, leprés, pians, icthyoses, syphilides, scrophules, psorides." Thus it has not the advantage of simplicity. The first divisions into eruptions affecting the skin of the head and those of the body is incorrect, as there is no species of eruption which has so special a seat that it can never be met with in other regions of the body with analagous characters; another disadvantage is, that of giving the same name to eruptions differing entirely in their primary form, in their progress, and in the treatment they require, and which are only similar at a particular stage of the disease when superficially examined. Thus M. Alibert comprehends under "dartre squammeuse humide," both some forms of eczema, a clearly vesicular affection, attended with the discharge of a fluid which forms yellowish scabs, and lichen agrius, a papular eruption which is attended with so much inflammation and painful tension, that in a later stage of the disease the summits of the papula ulcerate, and scabs are formed: now, in the first stage of lichen agrius is neither "squammeuse" nor "humide," and must therefore be placed in another section. This classification, although almost unknown in this country, has had many disciples in Germany as well as in France. This was owing, in great measure, perhaps, to the magnificent and attractive folio work which M. Alibert has published, (and of which Dr. Bateman has rather too severely said, "that the merit of his publication belongs principally to the artists which he has had the good fortune to employ,") and to the opportunities the author of it has had of promulgating his opinions in his popular course of lectures delivered at the Hôpital St. Louis, for many years without a rival; the apparent simplicity of the great primary division into two classes was a source of considerable attraction, libenter amplectuntur ea præcepta quæ sedulitatem non exigunt;

and the general terms "dartre" and "teigne," although conveying no distinct meaning, were most readily applied, and afforded a convenient cloak for ignorance. Eleven years since M. Biett, a co-physician of M. Alibert's at the Hôpital St. Louis, commenced a course of clinical lectures on cutaneous diseases, founded on the system of Willan and Bateman, which he slightly modified in a few non-essential details. Perhaps to those who may be unacquainted with the system of Paris hospitals, it will be as well to inform them that, unlike similar institutions in our own country, they are not the offspring of private munificence, but are wholly provided for by the government, which appoints a committee for their general superintendence; a tax which is taken at the barriers of Paris is applied to their maintenance. All invalids (except those who from severe accidents require immediate admission) first apply at a central office, where, after an examination, they are distributed to the various hospitals, but not indiscriminately, as some of these are set apart for peculiar diseases; thus the syphilitic patients are sent to the Hôpital des Venérins, children to the Hôpital des Infans, and those affected with cutaneous eruptions to the Hôpital St. Louis. This last hospital is of considerable extent, and Messrs. Alibert and Biett have each the care of nearly 100 beds, containing patients affected with skin diseases alone: as the out-patients are still more numerous, few institutions in the world can afford better opportunities for the study of a particular subject! To these advantages M. Biett adds that of a large private practice, the engagements of which, as well as a dislike, quite unusual among his countrymen, of publishing, are the causes of no work on a subject to which he has devoted his time, and powers of observation, having as yet proceeded from his pen. He has therefore found that his peculiar opinions have been borrowed from his lectures by many authors in a most wholesale manner, without acknowledgment. This was particularly the case in a work on skin diseases, published by a young physician of La Charité, named Rayer. Consequently two of M. Biett's former "internes," or house-surgeons, who had been in his wards several years, have brought out this work founded principally on his clinical observations and lectures, and therefore containing his opinions and modes of treatment. This volume is compiled throughout with that system which marks the later publications of the French medical press; the symptoms, causes, diagnosis, prognosis, and treatment, are given under separate heads in the description of each genus; and although the species and varieties do not agree "in toto" with those of Bateman, as they are less numerous, yet the names given by him, as well as by Alibert, are introduced where the form of the disease to which they have been applied is described.

It will be the object of this review not to copy descriptions which have previously been accurately made by Willan and perfected by Bateman, in his admirable "Synopsis," but to point out the alterations and improvements in classification, description, and treatment which M. Biett has deduced from the most experimental research. Numerous remedies which hitherto have been but little employed in this country, have had in his hospital a trial on a large scale, such as the iodurets of mercury, sulphur, &c. and it will be allowed that the efficacy of medicated and other baths may be estimated, when it is stated that 160,000 are given annually at the Hôpital St. Louis.

The eight orders of Willan are taken, but, instead of including all skin diseases under these heads, seven genera are omitted, as of an anomalous nature—these are lupus, purpura, pellagra, keloide, syphilitic eruptions, and diseases of the sebaceous follicles; these are separately described.

Exanthemata.

This name is given to acute inflammations of the skin, characterized by redness, which appears during pressure, generally accompanied by constitutional symptoms; the classes are erythema, erysipelas, roseola, rubeola, scarlatina, and urticaria. The definition of Willan agrees with this; but he adds that the redness is sometimes attended with partial extravasation, and he admits purpura; this is placed by M. Biett among the anomalous orders, and the reasons for the alteration will be given where the disease is described.

Erysipelas. Willan places this among bullæ; but, as the vesications are considered by M. Biett to be complications, the agreement of the other symptoms with exanthemata induces him to place it under this order. This agrees with the opinion of Mr. Lawrence, who thinks that erysipelas should not be separated from erythema, but that it should follow it, in a natural nosology. (*Medico-Chirurgical Transactions, vol.* XIV. *p.* 36.) Of erysipelas, which they define as a non-contagious exanthema, characterized by a deep red color of a considerable portion of the skin, with heat and tumefaction of this membrane, as well as of the subcutaneous cellular tissue, two species are admitted—1, True; and, 2, Phlegmonous erysipelas, as these agree with the E. simplex and phlegmonosum of Lawrence, which have been minutely described by that author, and reviewed in a former Number of this Journal, we shall not again detail them. M. Biett does not even go so far as Mr. Lawrence in recommending tonics or stimulants in any cases; the treatment to be pursued is to be strictly antiphlogistic. In true erysipelas of small extent, unac-

companied by general symptoms, low diet, with diluent drinks and lotions of Goulard water, are sufficient. Where the extent of the inflammation is greater, and the general symptoms are severe, with inflammatory fever, particularly where the individual is young and plethoric, blood is to be taken from the arm as often as the symptoms require it. When the pulse loses its strength, local bleedings are to be substituted. It is also serviceable to employ simultaneously local and general bleedings, taking care to take blood only from the neighborhood of the inflamed surface, never from that itself. Where the patients are debilitated and aged, great caution must be employed in using any of these remedies. Laxatives and mild purgatives are to be employed; more drastic purgatives and emetics are not to be given if there is much fever, dryness of the skin, heat in the epigastrium, with great thirst. Blisters should never be employed, except to fix the erratic erysipelas, and to recal the eruption if it suddenly disappears. This is contrary to the opinion of Baron Dupuytren, who applies blisters to the inflamed surfaces in all cases of erisypelas; considering the disease to be an effort of Nature to throw out a morbid matter, he endeavors to assist Nature, by producing an artificial crisis by vesications; he has found this treatment particularly successful in erratic erysipelas, which never forms bullæ.

The other exanthematous diseases are correctly described; but, as the divisions are similar to Willan's, and the treatment the same as is followed in this country, we shall pass to the next order.

Vesiculæ.

M. Biett admits five classes—varicella and miliaria, which are essentially acute diseases; eczema, herpes, and scabies, which are most frequently chronic. This division is important, as it regards the treatment, the two former requiring, in general, only a simple antiphlogistic regimen, the three latter are more obstinate, often demanding very energetic remedies. Willan adds vacciaia and rupia. M. Biett considers that the former may be more conveniently classed with pustules, and that the latter is a "bulla."

Eczema. This is an eruption of very small vesicles, agglomerated in large numbers, and usually occupying extensive, irregular, uncircumscribed surfaces. M. Biett has been in the habit of dividing, in his lectures, eczema into acute and chronic.

1. *Acute Eczema.* This comprehends, (1) Eczema simplex; (2) E. rubrum; (3) E. impetiginodes.

(1.) *Eczema Simplex.* This consists of extremely small vesicles, situated closely together, and developed without any areolar inflammation, on a surface, the color of which does not differ

from that of the surrounding skin; the vesicles are transparent and brilliant, they are formed without any precursory symptom, the patient finds a slight itching, and is surprised to see a numerous crop of vesicles; the small drop of serum they contain becomes disturbed and milky, it is absorbed, the vesicle dries up and desquamates. This eruption does not produce those inflamed surfaces, that exhalation of serosity and constant renewal of scales which are observed in the other varieties. Its progress is slow, and the successive eruption of new vesicles extends its duration generally to two or three weeks, sometimes more. It may be general, but more frequently it is circumscribed, and confined to parts of the arm and fore-arm, or between the fingers, where it may be mistaken for itch. Young people and women are most subject to this slight eruption; it can frequently be traced to arise from the direct application of irritants, as heat, medicated ointments, &c.

Acute eczema is, in the greater number of cases, a more severe complaint than E. simplex, and this more acute form has too well-marked degrees of intensity, namely, E. rubrum and E. impetiginodes.

(3) *E. Rubrum.* This eruption is preceded and accompanied by heat and tension; the skin is inflamed and of a bright red color. If it is closely examined, it appears to be studded with small silvery eminences; these are the commencement of vesicles, which, in a short time, acquire their full size, and appear about the size and form of the head of a small pin, with a well-marked inflammatory areola. From the 6th to the 8th day, sometimes before, the redness diminishes, the fluid is absorbed, the vesicles dry up, and the disease terminates by a slight exfoliation, produced by the "debris" of the vesicles. On examining the eruption at this period, it presents some characteristic marks, the surface is of a reddish color (which remains for some days after the cure), covered with small round points; each of these is exactly surrounded by a whitish border, indicating the line of demarcation between the portion of epidermis, which was raised, and the areola which surrounded its base. At other times, the termination of E. rubrum is not so simple; the inflammation, instead of diminishing, persists, or even augments, the vesicles become confluent, break, and allow the fluid they contain to escape—this, flowing over an already inflamed surface, irritates it more, and causes superficial excoriations, which pour out a serous liquid; this thickens, and forms thin and soft lamellæ, often of considerable size, which are frequently renewed. The serous exhalation gradually ceases, and the healing process proceeds from the circumference to the centre, the dis-

ease terminating in two or three weeks. Frequently the eruption, instead of gradually improving, goes into a chronic state.

(3.) *Eczema Impetiginodes.* In the earliest stage, the vesicles are similar to those of E. rubrum, but the inflammation is more acute, the skin is tumified, the liquid contained in the vesicles loses its transparence, and becomes sero-purulent. These pustular vesicles, agglomerated and confluent, burst, the liquid concretes, and forms, not lamellæ, as in E. rubrum, but yellow, soft scales, composed of numerous thin layers, sometimes very large. These fall, and expose a crimson surface, from which a reddish fluid is poured out, and new scales are formed, which follow a similar course to the former ones; at length the inflammation diminishes, the pustular vesicles cease to be produced, the scales become thinner, the surfaces beneath them are less red, and the skin is gradually restored to its healthy state. This eruption may continue two or three weeks; it may be confined to a single spot, or cover the whole cutaneous surface, accompanied by severe general symptoms; when this is the case, the vesicles can often be seen in their various states. When E. impetiginodes isconfined to a single spot, a careful examination will detect the vesicles of E. rubrum around the vesiculo-pustular eruption, and in the centre of it. E. impetiginodes may pass into the chronic state, which does not differ from the chronic form of eczema rubrum. It must be clearly understood that E. impetiginodes is not E. rubrum complicated with pustules of impetigo, but an eruption of vesicles, at first transparent, which do not change into true pustules, but into pustular vesicles—otherwise the disease would be a true impetigo. Sometimes, indeed, the inflammation is so acute, that pustules of impetigo and of ecthyma are complicated with this eruption; but they are readily distingushed from it by their containing pus from the commencement, and from their larger size.

2. *Chronic Eczema.* This is the latter stage of the more acute forms of eczema. The skin, constantly irritated by the presence of an ichorous fluid, and by the successive eruptions of vesicles, instead of returning to its natural state, inflames very deeply, becomes excoriated and fissured, especially near the articulations; the constant exhalations of serosity is so abundant, that the linen covering the part is speedily soiled, and great care must be taken in removing it, lest the tender skin is torn, causing considerable hæmorrhage; the surface is tumified and softened, so that the impression of the covering is often left upon it. In other cases, after a certain time, the fluid is exhaled in less abundance—it thickens and forms thin, soft, yellow lamellæ, slightly adherent, often of considerable size, leaving beneath them, after their fall, a surface inflamed and but slightly tumid.

These lamellæ are formed more slowly, they are more dry, and the disease seems on the point of being cured, when, without any known cause, the inflammation commences with fresh violence; the surfaces begin again to grow red, they are covered again with vesicles, which speedily break, and the disease follows the same progress which has been pointed out: this disease may last many years, with similar exacerbations. Finally, in some cases, all serous exhalation ceases, the scales become more dry, less yellow, and more adherent; the skin is red, thickened, and is marked with deep fissures. In this state, the eczema resembles some forms of psoriasis, a true squamous eruption, and the more so as the scales appear to be lamellæ of an altered epidermis, not the concretion of an exhaled fluid. Thus some cases of eczema become real scaly diseases, and the vesicular character returns, in proportion to their progress towards a complete cure. In some cases, especially on the limbs, there remains one or two small spots of skin, thin, smooth and shining; they are covered with whitish, and very small scales, similar to epidermis; no vesicle can be seen on these patches, and the diagnosis becomes very difficult, unless a new eruption over the surface, or some small vesicles around the circumference point out the nature of the eruption. Chronic eczema, at first occupying but a small surface, may extend very considerably; in some rare cases this eruption, which was at first no larger than a five shilling piece, has been known gradually to cover a whole limb.—Every form of chronic eczema is attended with most severe itching, frequently more difficult to bear than acute pain. Whatever may be the courage of the patient he cannot resist the unconquerable desire he has of scratching the part, which only increases the symptom. The itching becomes intolerable and the cause of severe anguish, when the eruption occupies the upper and inner parts of the thighs, (in women often accompanied by a chronic discharge from the vagina,) and extending around the vulva and anus. After an indefinite space of time, the itching becomes less, the serous exhalation diminishes gradually, and at length ceases; the scales are more dry, the skin less inflamed, the circumference is the first cured, the lamellæ become thinner and smaller until they cease to be formed, the skin remains for some little time after the eruption has disappeared, rather redder and smoother than natural, but is eventually restored to its natural state. The duration of this eruption is indefinite; it may remain many months or even years.

Eczema may arise on any part of the surface of the body, but its more frequent situation is on that part of the skin which is furnished with hairs and numerous follicles, as the pubis, groins, scrotum, &c. In some cases it is confined to a single point, as

the breast, the hairy scalp, the ears, the scrotum, constituting local varieties of considerable practical importance; but most frequently it appears on many parts at the same time, so as sometimes to occupy the whole surface of the body simultaneously. Eczema is not contagious; but, in a few cases it has been communicated by the prolonged contact of two mucous surfaces during coition It attacks adults, and women more frequently than men. The causes are in many cases not discoverable; in others they are easily traced; thus it is often the result of the heat of a large fire or of the rays of the sun (E. solare—Willan); it follows the application of a blister, or of frictions, particularly with irritating ointments, as mercurial ointment. This has been called eczema mercuriale, but it differs from neither of the other forms. It is often produced by the excessive use of ardent spirits; and in those individuals who work in the sugar refiners' manufactories, eczema frequently follows a burn. Whatever may have been the causes which produced eczema, its chronic state and its duration generally for a long period must be attributed to a peculiar constitutional disposition. The handling of metals, the contact of powdery substances, &c., are the causes frequently of eczema of the hands (grocer's itch.)

Diagnosis. This is of very considerable importance. Eczema simplex has often been mistaken for the itch, with which it agrees in being developed without inflammation, in affecting certain parts, as the wrist and lateral parts of the fingers, and in causing severe itching; but the vesicles of eczema are flattened, those of itch are acuminated; those of eczema are always agglomerated, in itch they are in general isolated or altogether distinct, or but one or two vesicles are observed in a surface of some extent, as between two fingers, which is never the case in eczema. The itching of eczema is a kind of smarting very different from the exacerbations of itching in the itch, in the former case it is truly painful, whilst in the latter it is a sensation "plutôt agréable que pénible"! Finally, the itch is contagious, eczema is not generally so. Eczema rubrum may be confounded with miliaria, but in this latter eruption the vesicles are never confluent as in the former, or confined to a small space, they are on the contrary in an innumerable quantity; they are more voluminous in milaria; the severe general symptoms which accompany symptomatic miliaria, sufficiently distinguish this affection from eczema. That variety of miliaria which appears in individuals who have taken severe exercise during the excessive heat of Summer, resembles eczema considerably, but the vesicles are more universal, the sweats are most abundant, and the termination of the eruption more speedy than in eczema. Eczema impetiginodes differs from impetigo by well-marked characters. The vesicular erup-

tion covers large surfaces, impetigo is most frequently confined to a small space. The pustules of impetigo never contain even at their commencement a transparent serum, their base is larger and the fluid they contain is thicker. The pustular vesicles of eczema impetiginodes are always vesicular at their commencement, they never contain true pus but a yellowish serosity, a seropurulent liquid. In impetigo the pustules produce true scabs, which are thick, more or less yellow, ragged, unequal, like shagreen; whilst the pustular vesicles of eczema only form thin scales, of greater extent than thickness, and around them vesicles of eczema rubrum are always seen, which never is the case in impetigo. When the vesicles of itch are mixed with pustules (which are in the greater number of cases a complication) this eruption may be confounded with eczema impetiginodes, unless the vesicles themselves which always exist in large numbers are not carefully examined according to the diagnostic marks stated above. The diagnosis of chronic eczema is often much more difficult. In lichen agrius there is an exhalation of serosity which forms scales, but these scales are smaller, thicker, and more yellow than those of eczema, approaching more nearly the nature of scabs; if they fall they expose, not a red, smooth, shining, and slightly excoriated surface as in eczema, but a surface irregular from a number of small prominent points (papula) generally appreciable to the eye, and constantly to the finger gently drawn over the seat of the eruption. At other times, as in chronic eczema, the lichen produces thin dry scales without any appreciable serosity and local inflammation, but then the skin is much thicker and ragged than in eczema. In lichen some few papulæ are constantly found near the eruption, easily recognised by their hardness and chronic progress, whilst vesicles are seen near the patches of eczema. It requires great attention to distinguish these two eruptions on the hands.—Some varieties of chronic eczema may be mistaken for psoriasis; but they differ from it in the constant presence of vesicles in the neighborhood of the eruption and in the scales which are less dry and less friable. In that form of chronic eczema in which at a late stage the skin is red and covered with small whitish scales, the diagnosis is much more difficult, particularly if the physician has not watched the progress of the disease; but the appearance of the skin is different in the two affections; in eczema it is not elevated or in a state of hypertrophy as in psoriasis, neither is it marked with fissures in every direction as in psoriasis inveterata, but they are in relation to the muscular motions of the part.

Prognosis. Eczema, particularly the acute form, is generally a mild eruption, but when it becomes chronic and occupies a

considerable surface, it is a very troublesome disorder. The prognosis is more unfavorable when the eruption has existed many years, and new crops of vesicles form when a cure is expected. Without endangering the life of the patients it embitters their existence.

Treatment. In the slight forms of eczema simplex a mild diet, lemonade for a beverage, and the local application of warm water is sufficient; when the eruption is prolonged, and of greater extent, attended with severe itching, laxative drinks must be given and alkaline or sulphur baths employed. The alkaline baths are made by dissolving in the bath from four to eight ounces of subcarbonate of potash or of soda, according to the age of the patient and the stage of the eruption: and in a sulphur bath, four ounces of sulphuret of potash are to be dissolved. If eczema rubrum and impetiginodes occupy but a small surface, the patient must be put on low diet with diluent drinks; if they are of greater extent, and the constitution sympathises, especially if the patient is young and vigorous, either a general or local bleeding, by means of leeches, in the vicinity of the eruption, must be resorted to, with simple and emollient baths; or local mucilaginous baths and potato cataplasms, if the vesicles have broken, and have left the surface red, excoriated, and painful; applications containing sulphur or mercury are to be avoided as likely to increase the irritation. In all cases it is obvious that the irritating causes must first be removed. Chronic eczema, when not very far advanced, often yield to the following treatment: acidulated drinks and baths are the remedies most generally employed.—Half a drachm to a drachm of nitric or sulphuric acid is to be mixed with a pint of barley-water, and drank at intervals in small quantities, a small cup of cold water being taken after each dose of the acid at first until the stomach becomes accustomed to it. This is particularly beneficial where there is great discharge of serum from the surface of the eruption with intense itching.—Nitric acid is more energetic than the sulphuric. The heat of the baths should be from 25° to 27° (Réaumer), the patient should remain in them about an hour daily; they are rendered emollient by the addition of mucilage and of gelatine—a pound and a half of gelantine is necessary for a single bath. Laxative drinks are frequently useful, as a pint of whey, in which two drachms of acidulated tartrate of potash has been dissolved, or half an ounce of sulphate of soda or potash mixed with a pint of veal broth, &c. Alkaline remedies are very servicable when, notwithstanding the use of emollients, the itching continues unabated; the alkaline bath should be taken before going to bed. From half a drachm to a drachm of subcarbonate of potash may be daily administered internally. When the eruption is of long-

er standing and occupies a more extended surface, more active remedies must be employed, such as purgatives, sulphur baths, and vapor baths. The purgatives to be employed are calomel, Plummer's pill, aloes, jalap, gambouge, and Seidlitz water.—Sulphureous waters can be taken internally as well as applied externally; they are only suitable when the disease has existed for a very considerable time, and when the eruption affecting the lower limb is of a violet color. The waters of Barèges, of Enghein, and of Cauteretz are the most usually employed; they can be produced artificially, by adding to a simple bath two or three ounces of sulphuret of potash, varying the quantity according to the excitement which is desired to be produced; in all cases it is proper to use alternately simple warm baths with sulphur baths. When these waters are administered internally they should be diluted at first with two thirds barley water or milk, and this should be gradually diminished until the patient can take the medicine in its undiluted form. Vapor baths are sometimes very useful, but care should be taken that the patient does not expose himself to very hot vapor. When the disease is local, a stream of vapor directed on the part (les douches de vapeur) is often very serviceable. If the extent of the eruption is much reduced, its cure is hastened by gently rubbing the part with an ointment composed of a scruple or half a drachm of the ammoniated protochloride of mercury and an ounce of lard. In the course of the treatment intense itching is relieved by the application of lotions containing superacetate of lead, emulsion of bitter almonds, or decoctions of dulcamara, hyosciamus, &c.—In more obstinate cases energetic remedies must be employed, provided there is no chronic affection of the stomach or intestines, such as tincture of cantharides, commencing with a dose of three drops every morning, then five drops, and augmenting it five drops every six or eight days until each dose contains twenty-five or thirty drops, and arsenical preparations, small doses of which are to be continued for a month or six weeks.—In the scaly form of eczema, when local, particularly when occupying the hands, the following applications are useful. Ointments, composed of protonitrate of mercury, ℈j. to an ounce of lard; or, of protoioduret of mercury, ℈j. or so, or twelve grains of the deutoioduret of mercury to the same quantity of lard; a little camphor may be added to appease the itchings; the advantages of the internal use of mercury are at least doubtful, sometimes it is injurious.

Among the local varieties it is of importance to mention, eczema of the hairy scalp. In some cases it occupies this part alone, but most usually part of the face also. The exhalation of a fluid is so profuse that the hairs are at first soaked in it; the

serum dries and forms whitish scales which cover and connect the hairs separately in small bundles of five or six hairs each; from this circumstance and the color of the scales Alibert has termed it teige amiantacée. When the exhalation is less abundant the scales are smaller, dry, and furfuraceous, quickly renewed, falling off in great abundance if the slightest friction is used; this is the teigue furfuracée of Alibert, and may be confounded with pityriasis capitis. The bulb of the hair is not diseased in either of these affections, and they require a simple and mild treatment, such as light laxatives, emollient washes at the commencement, and alkaline lotions, when the eruption is farther advanced. By those who do not pay sufficient attention to primary forms of eruptions, this has been confounded with porrigo; but the diagnosis is simple and of the highest importance. As eczema is one of the most frequent, and in its chronic form, one of the most tedious, cutaneous eruptions, we have given a lengthened and detailed description of it, particularly as M. Biett has paid especial attention both to its diagnosis and treatment, which, together with the division which he has adopted, into acute and chronic, are of much practical value. The Synopsis of Bateman, which cannot be too highly praised for the correct and classical descriptions which it contains, and the medical learning and research which it exhibits, is often deficient in diagnosis; this point has been carefully supplied by our authors, and we shall make much use of it.

Herpes. This is divided into, 1, Herpes phlyctenodes, having two varieties—H. præputialis and labialis—2, H. zoster—3, H. circinatus—4, H. iris. Neither the description of these forms, nor their mode of treatment, differs from that given by Bateman.

Scabies. M. Biett considers this to be a decidedly vesicular disease, and classes it under this order. Bateman says, "that from the affinity with pustules, vesicles, and papulæ, it almost bids defiance to an artificial classification;" and, without any sufficient reason, he follows Willan, and classes it among pustulæ, although two of its varieties, S. papuliformis and S. lymphatica, are truly vesicular, and much more frequent than S. purulenta, a comparatively rare form of the eruption. The term S. papuliformis, which Bateman applies to his first variety, is indefinite, as the eruption consists of "minute itching vesicles" (*Bateman's Synopsis, p.* 163, *6th, ed.*) resembling papules only when carelessly examined, it is objectionable, as liable to confuse the student, who should constantly bear in mind the distinct vesicular nature of scabies, in contra-distinction to the papulæ of lichen and prurigo, which are often mistaken for it.

The itch is a contagious eruption. In infants, it is developed four or five days after exposure to contagious influence; if they are very feeble, a few days longer—if very strong and robust, not more than two days intervene; in adults, from eight to ten days in the Spring and Summer—from fifteen to twenty in the Winter; it is longer in old men, whose skin is more dry and hard.

Symptoms. A slight itching is first felt in the parts which have been exposed to the contagious contact, increasing by the warmth of the bed, or by heating foods; accumulated transparent vesicles form, of a light rosy hue, in young subjects, containing a serous and viscid liquid. If the patient is weak, their progress is slow, and vice versâ. The eruption appears in the flexures of the joints, as at the wrist, between the fingers, in the bend of the arm, arm-pit, hams, &c. and, later, on the belly. It may occupy the whole cutaneous surface, with the exception of the face; but more often it is less extensive. In some cases, the number of vesicles is very few, and they are scattered; if they are numerous, the itching is so insupportable that they are destroyed by scratching, the liquid escapes, and the vesicles are re-placed by numerous red and often inflamed points, and thin, yellowish scales. If the patient is young, vigorous, and of a sanguine temperament, the action of the nails may so augment the inflammation, that the eruption becomes complicated with pustules of impetigo and ecthyma. In some few cases, the vesicles have become pustular.

Although M. Biett has employed, at various times, the strongest microscopes in investigating this eruption, he has never been able to discover the insect, which various writers have described with minuteness, and of which M. Gales, in 1812, stated that he had collected upwards of 300, and was enabled to ascertain their mode of generation, laying eggs, &c! M. Biett believes that they do not exist; it would be more charitable to these writers to consider with Bateman, who was unable to discover these insects, that the production of acari, in scabies, is a rare and *casual* circumstance.

Diagnosis. It is hardly necessary to mention the importance of accurately distinguishing this disease, both for the comfort of whole families and the reputation of the medical practitioner. It is often confounded with prurigo; but, independently of the distinct primitive characters, the former vesicular, the latter papular, scabies is found in the flexures of the joints, whilst prurigo occupies the opposite surface, "dans le sens d'extension." In prurigo, the summit of the papulæ, which are almost always destroyed by scratching, has a small, dry clot of blood, black, or nearly black; the broken vesicles of itch are covered by a small,

thin, yellowish scale; in prurigo, the itching is more severe and burning, and the eruption is not contagious. Lichen simplex may sometimes be mistaken for scabies; but, on examination, it will be found to consist of papulæ, generally very close together, which is never observed in the itch; these papulæ are of the color of the skin, whilst the vesicles of itch are slightly rosy; when lichen affects the hands, it is found on their backs, not between the fingers; the itching is slight, the eruption is not contagious. The vesicles of eczema are flattened, of scabies acuminated; in eczema they are agglomerated, in scabies generally distinct; the itching of eczema is a general smarting, very different from the exacerbations in itch. Eczema is non-contagious. Scabies may be complicated with eczema, this is often the effect of the irritating applications of quacks; also with the pustules of impetigo and ecthyma, which appear on those parts where the vesicles exist in great numbers; and these are the cases which have been called pustular itch (scabies purulenta). If the inflammation increases, it may affect the cellular membrane, and these pustule may be complicated with boils. In some few cases, it exists simultaneously with lichen

Prognosis. Scabies never terminates spontaneously; abandoned to itself, it may remain many years, or a whole life. Under a rational treatment, its duration varies from ten days to one or many months, according to its complications.

Treatment. M. Biett has found the following remedies to succeed most constantly and promptly, without causing, from irritation, other eruptions. Half an ounce of an ointment, composed of two parts of sublimated sulphur, one part of subcarbonate of potash, and eight parts of lard, is to be rubbed over the parts affected with the eruption night and morning; a warm bath is to be used every day, or at least every other day. The average length of this treatment is twelve days. For young children, sulphur baths and ablution with soap and water are alone necessary. Sulphur baths and fumigations are useful auxiliaries, but the cure is tedious (from 25 to 33 days) if they are alone employed, The "lotion of Dupuytren" is conveniently employed, in those cases in which the patients do not like frictions with ointment; but it does not suit irritable skins. It consists of four ounces of sulphuret of potash, half an ounce of sulphuric acid, and a pint and a half of water; sixteen days is the average length of time required for a cure. In recent and mild cases, the powder of pynovel, which is powdered sulphuret of lime, is serviceable; half a drachm of the powder, moistened with a little oil, is to be rubbed over the eruption night and morning. The cure is effected in about fifteen days. If the itch is complicated with eczema, the sulphur applications must

not be employed, but diluent and slightly acidulated drinks must be substituted. If there are pustules of impetigo or ecthyma, the use of any irritating application must be discontinued; the simple warm bath and gently laxative drinks are useful, and it is advantageous to soak the hands and fore-arms, which are often the seat of the eruption, in local emollient baths. In all cases, the linen should be frequently changed.

Bullæ. The two varieties of this order are pemphigus and rupia. Pemphigus consists of an eruption of bullæ, of variable size, on different parts of the body, containing a liquid, at first serous, subsequently reddish; they are usually distinct, but numerous, succeeded by thin crusts and superficial excoriations. There are two forms, the acute and the chronic.

(1). *Acute Pemphigus.* The eruption is preceded, during 24 or 48 hours, by symptoms of fever, or, in milder cases, by a general feeling of malaise. Circular patches of a red color are seen, distinct, small, and numerous, generally scattered over a large extent of the surface of the body; on these, bullæ are speedily formed; when they cover the whole inflamed surface, they have the appearance of small, isolated, transparent tumors, from the size of a pea to that of a nut; but when they only occupy the middle of the inflamed spot, there is a red areola surrounding each. In some cases, bullæ do not form on all the erythematous patches, but they are speedily produced on rubbing the part. After some days they open, and are replaced by thin, brown crusts, or little dry whitish lamellæ. Sometimes the attendant general symptoms are very slight. The duration of the disease is from one to three weeks. Dr. Willan denied the existence of an eruption of bullæ with fever, to which the older writers had applied the term pemphysis; and defined pompholyx as "an eruption of bullæ, without any inflammation around them, and without fever." The pompholyx diutinus of Willan, answers to the chronic pemphigus of Biett. It is more common than the acute form, and is confined to adults and elderly people. Feverish symptoms are not observed unless the eruption is very extensive, and prolonged by successive crops of bullæ. It is preceded by lassitude and pains in the limbs; numerous red points first appear, attended with a tingling sensation; the epidermis becomes raised by a serous fluid, forming, in a few hours, irregular bullæ, as large as a nut or a walnut; these, in a few days, increase to the size of an egg or larger; they break and discharge a lemon-colored serosity, and the epidermis, relaxed and wrinkled, is partially detached, exposing an excoriated painful, and red surface; towards the third or fourth day, the liquid, in the bullæ which have not burst, become reddish, the vesications subside, and small, brownish, thin, and flattened scabs, are

formed. New bullæ are formed near the older ones, and they go through the same stages. In some rare cases, the whole surface of the body is covered with the bullæ, which become confluent. The eruption continues from one, two, or three weeks to many months or years. It most frequently attacks old people, who have been debilitated by the effects of bad and scanty diet, damp situations, &c.

Diagnosis. From rupia simplex, by the bullæ in this affection being few in number, and followed by true ulcerations and thick prominent scabs. In ecthyma, the epidermis is sometimes raised so considerably by pus, as to be mistaken for a bulla, but the contents are purulent, not serous. When the bullæ of pemphigus are of small size, and near together, it resembles herpes phlyctenodes; but distinct bullæ in other parts, and their size being more considerable than that of vesicles where close together, mark the difference. The bullæ on an erysipelatous surface are accidental productions. The scabs of pemphigus may be confounded with these of impetigo; but, in the former eruption, they often cover the body, or nearly so; in the latter, they are generally confined to a smaller surface. The scabs of impetigo are rough, thick, and irregular; those of pemphigus thin, often convex in the centre, and the shape of the large bullæ.

Prognosis. The acute form is a mild disease, and terminates favorably; the chronic always indicates a bad state of the constitution, and is dangerous, if the eruption is very extensive, and occurring in individuals weakened by old age, misery, or debauchery.

Treatment. In acute pemphigus, strict diet, diluent drinks and rest are sufficient, unless inflammatory symptoms exist; in such cases, tepid baths, bleeding from the arm, or leeches to the anus are required. Chronic pemphigus requires a cautious antiphlogistic treatment, diluent and acidulated drinks, tepid baths, and, in a later stage, alkaline baths; if there is much pain, soothing applications, and opiates administered internally; bleeding will be required, if there are symptoms of inflammation of the lungs, or any internal organ. If, nothwithstanding the use of such remedies, new crops of eruption appear, the strength of the patient must be restored by good nourishment, wine, acids, and quinine, &c. with preparations of iron and other tonics; this change of treatment is of advantage, even in young subjects.

Rupia. Biett has differed from Bateman, who placed ... eruption under vesiculæ. It is defined as an eruption of bullæ more or less voluminous, isolated, flattened, filled with a fluid sometimes serous, sometimes purulent or blackish, succeeded by

thick scabs and ulcerations. It is divided, according to Bateman's classification, into R. simplex, prominens, and escharotica. The ulcerations frequently heal slowly, and it is recommended to quicken the process of cicatrization, by the gentle application of nitrate of silver; in some cases, it becomes indispensably necessary to modify the diseased surface by means of active caustics, such as the repeated and lengthened application of nitrate of silver, or of lotions of nitric or muriatic acid; in some cases the concentrated acid is necessary. M. Biett has found an ointment composed of one scruple of the proto-ioduret of mercury, or of twelve to fifteen grains of the deuto-ioduret to an ounce of lard, very efficacious.

Pustulæ.

Impetigo. This is characterized by an eruption of psydacious pustules generally situated closely together, and forming thick, rugose, and yellowish scabs. From the form these pustules assume, it is divided into impetigo figurata, having a determined form, either round or oval, and I. sparsa, in which the pustules are irregularly disseminated. The impetigo scabida of Willan is that state of impetigo figurata in which the scabs have acquired a considerable thickness. The description of these forms given by Bateman is not excelled by our author's.

Diagnosis. The psydracious pustules forming thick, ragged, yellowish scabs, distinguishes the eruption from the vesicular or pustulo-vesicular eczema which forms thin scaly lamellæ. When impetigo is situated on the chin it is likely to be confounded with sycosis, but in impetigo the pustules are small, yellow, and close together, the scabs of a thick transparent, yellowish green; there are neither callous elevations, or tubercles; the pustules of sycosis are larger, less yellow, isolated, more elevated than those of impetigo, the discharge is much less abundant, and the scabs are drier and of a deeper color. The distinct pustules of porrigo, "let into" (endrâssé) the epidermis forming speedily a yellow and dry scab, of a cup shape, as well as the contagious nature of the eruption and the loss of hair which accompanies it, and which never follows impetigo, distinguish porrigo favosa and scutulata from any impetiginous eruption.

Treatment. When the eruption is slight, emollient lotions with decoction of poppies, tepid milk, almond emulsion, &c. and cooling drinks, are sufficient; if it is more extensive with general symptoms, bleeding either local or general, and tepid baths; towards the end of the disease, and particularly when it is obstinate, vapor and douche baths, together with active purgatives of calomel, jalap, Epsom salts, &c. or acidulated drinks,

with alkaline alternated with acid baths, or a lotion composed of gr. g. medicinal hydrocyanic acid, ʒij. vel. ʒiij. alcohol, ℥ss. distilled water, ℥viij.; previously to the employment of these applications it is necessary to cleanse the surface from the scabs. When the eruption becomes chronic, sulphur taken internally, and applied externally by means of baths, is very beneficial. In those cases which have resisted all other means of treatment, a strong solution of nitrate of silver or an acid has been applied to the diseased surface, and immediately washed off, so as to prevent the too great action of the caustic. In such cases the internal employment of small doses of arsenic is of signal service.

Acne. A chronic pustular affection, consisting of an eruption of small, isolated pustules, of a deep red color, having a base more or less hard, and frequently forming after the disappearance of the pustules, small, hard, red, circumscribed, indolent tumors. It will be seen by this definition that the tubercles which were regarded by Willan, as the elementary lesion are here considered to be the termination of pustules. Acne punctata, which is admitted by Willan, certainly does not agree with his definition of acne; it is omitted by M. Biett, who considers it only as a frequent complication. The division into A. simplex, indurata, and rosacea, is adopted. The descriptions of this well-known eruption do not differ materially from those by Bateman; but as there are some peculiarities in the mode of treatment, we shall mention them; few cutaneous diseases being more troublesome from their obstinacy in resisting medical aid, and more annoying from their affecting those parts which are most exposed at an age when the "cura cultus sui" is considered of much importance. When there is a considerable crop of pustules of acne simplex, or indurata, a general bleeding, low diet, with abstinence from spirits, wine, &c. is necessary; to produce an absorption of the tubercles, lotions of rose-water and alcohol should be employed, their strength depending on the state of the pustules, and the quantity of irritation which is required to be produced, or a lotion containing five or six grains of oxymuriate of mercury, an ounce of alcohol, and half a pint of distilled water; frictions also are very useful, with an ointment composed of the ammoniated protochloride of mercury, ℈j. to ʒj. lard, ℥j. But of all the preparations which M. Biett has employed, he has found none more useful in producing the absorption of these tubercles than the ioduret of sulphur ointment, (ioduret of sulphur, gr. xij. vel. gr. xxiv. lard, ℥j. Baths, and particularly douche baths, of the vapor of hot water, directed on the face for twelve or twenty minutes daily, assist the action of the other remedies. Purgatives are hurtful. The sulphur waters of Baréges, Enghien, &c. are useful, both taken internally

and employed externally. In acne rosacea, these local applications are generally useless, often prejudicial; great attention to the state of the general health is alone required; excesses at the table, wine and spirits, are to be avoided; the habits of the patient must be sober and regular; a mild diet habitually composed of white meats, fresh vegetables, cooling succulent fruits, must be persisted in, and constant care taken to avoid fatiguing exercises of all kinds, confinement to the house, or in warm rooms near a fire, mental anxiety, &c.

Sycosis or "Mentagre." This, like acne, is considered by Biett to be pustular in the first instance, and to be tubercular consecutively. Its seat is principally the chin, upper lip, and occasionally the lateral parts of the jaw over the masseters. It commences by distinct, accumulated, psydracious pustules; in six or seven days these burst, and brownish scabs are formed, or if the subject is young and vigorous, one large scab. The centre of each pustule will be found to be occupied by a hair. In many cases, particularly in weak and feeble individuals, as the pustules decline, their base becomes hard, red, and tumefied, complete resolution not having taken place; from this tubercular appearance sycocis has been mistaken for an originally tubercular disease. The summits of these elevations may subsequently become ulcerated. Its duration is very variable; in many individuals it is very obstinate and subject to return.

Diagnosis. The pustules of impetigo figurata are flattened, and hardly elevated above the level of the skin; they are in groups, and their progress is acute: in sycosis the pustules are acuminated, elevated above the level of the skin, generally isolated and distinct. The pustules of impetigo open about the third or fourth day, and the fluid that escapes forms bright yellow, thick and large scabs; the pustules of sycosis do not burst until the 5th or 7th day, and the scabs are of a deep brown color, much thinner, and drier, than those of impetigo. The pustules of ecthyma are larger, and their base more inflamed, than those of sycosis; the size of the scabs is also greater, they are thicker, and more adherent, and not followed by tubercular indurations. Syphilitic pustules are distinguished from sycosis by the absence of heat and pain; their base is copper-colored and violet, they are rarely found on the inferior part of the face, but rather on the alæ nasi, forehead, nnd commissure of the lips. Syphilitic tubercles are of a shining, and of a dull copper color, appearing to affect the superficial layers of the skin, whilst the conoidal tubercles of sycosis are deeply implanted in it.

Treatment. In the first place, the cause is to be removed. The beard is to be cut with scissors, not with a razor; repeated applications of leeches behind the ears, and below the jaw;

emollient fomentations and poultices of bread or potatoe, and purgatives with low diet in the first instance. When the disease has lasted some time, and the tubercles are voluminous, stimulant frictions with the ammoniacal protochloride of mercury, or of the deutoxide or sub-sulphate of mercury, in the proportion of a scruple to a drachm of either of these preparations to an ounce of lard, are to be employed; also vapor-baths, and streams of vapor, or sulphuretted waters, directed on the part renders absorption more active.

Porrigo. Seven varieties of this affection have been described by Willan. M. Biett thinks that there are but two kinds, which the names P. favosa. and scutulata; he considers porrigo furfurans to be either pityriasis capitis, or more often chronic eczema of the scalp; and porrigo larvalis to be a form of eczema impetiginodes, or impetigo figurata, to which also he refers the porrigo favosa of Willan, and describes under the term favosa, what that author has called lupinosa. The importance of readily distinguishing these contagious cutaneous affections is such, that any division by which their diagnosis is rendered more simple is very advantageous. Dr. Bateman felt the impropriety of classing contagious and non-contagious eruptions under the same class, and in a note to his 6th edition, (p. 160,) questioned the propriety with which Dr. Willan classed the crusta lactea under the genus porrigo, and confessed that he left it there "in deference to his venerated preceptor."

Porrigo Favosa. (P. Lupinosa, Willan: Teigne Faveuse, Alibert.) This eruption most frequently affects the hairy scalp, but it is sometimes found on every other part of the body. The eruption consists of pustules denominated "favi," which are at first small, circular, set deeply in the skin, containing a liquid which immediately concretes, forming a yellow, straw-colored, dry matter, having a central depression, which can by means of a lens be recognized at a very early period; this is well-marked at the end of five or six days; the pustules are usually isolated at the beginning, sometimes grouped; the skin surrounding each is very red, there is greater or less itching, and each pustule is often traversed by a hair. The concretions augment slowly in quantity, preserving their central form and cup-like depression; when they approach each other, they unite and form yellow incrustations of greater or less extent, covered with alveolar depressions, each of which corresponds to a former pustule. Alibert has judiciously compared the appearance of this stage of the eruption to that of the cup-like receptacles of lichens, which cover the trunks of some trees; this is peculiarly applicable to these instruments, which sometimes surround the limbs. If these concretions are detached by emollient applications, the

skin beneath is found to be slightly eroded, and new incrustations do not form unless a renewed eruption of favi takes place; the red and fetid sanies which often flows from the excoriated surface forms irregular scabs. When the disease is not interfered with, the crusts become very adherent, and remain for months or even years; they increase in thickness, are of a white color, and eventually break off in fragments; the skin beneath is thickened and changed by chronic inflammation. Frequently successive crops of pustules form in any places. The hairs even from the commencement are pulled out with facility; in a later stage they fall and leave the skin smooth and shining: new hairs rarely are formed on this surface; if they are reproduced, they have a remarkably lanuginous appearance. Alibert has compared the smell of the eruption to the urine of a cat. The duration of the eruption is uncertain. Alibert has denied the contagious nature of this disease, but M. Biett has been convinced, from numerous cases, that this opinion is not correct. A case which occurred in one of his wards at the Hôpital St. Louis last Summer, and which was reported at the time in one of the medical periodicals, afforded him an additional proof of its contagious nature. A man had been a patient in the wards some months, the greater part of whose trunk and legs were covered with the well-marked eruption of porrigo favosa. In the next bed was a patient admitted subsequently with pustules of ecthyma luridum, and after some weeks two or three well-marked "favi" appeared on his fore-arm. On inquiry it was found that this man officiated as tailor to the ward, and had been employed in mending some of the garments of the infectious patient.

Treatment. This is almost wholly external: in a few cases only tonic bitters or laxatives are required. Great cleanliness must be observed, the hairs must be cut short or shaved, and the incrustations detached in order to apply local remedies to the diseased surface. In order to detach the incrustations, large emollient cataplasms must be employed, and the surface must be washed with soft soap and warm water. Preparations of alkalies and of sulphur, and acid lotions, are the best local applications. In order to detach the hairs after the surface is cleansed, the scalp is to be anointed daily from five to ten minutes with an ointment composed of one or two drachms of subcarbonate of potash or soda, mixed with an ounce of lard; lotions for the same purpose are made by dissolving two drachms of this salt in a pint of water. A lotion composed of a drachm or two of sulphuret of potash with a pint of water, or the following lotion, (Barlow's lotion,) containing sulphuret of potash, ℥ij. white soap, ℥iiss. lime water ℥vij. alcohol ℥j. frequently is of great use in modifying the diseased action of the skin. Light sulphur

douche baths, repeated daily, fulfil the same indication still better than simple lotions; and they have this advantage, they prevent the ointments employed remaining too long on the surface. Great care is required in the application of the remedies. The basis of the remedies employed by the Messieurs Mahon is an alkali, and the fame they have gained is owing greatly to their applying invariably the medicaments with their own hands; the number of successful cases which they have treated has been over-rated, as they make no distinction between porrigo and other less troublesome affections of the scalp, denominating them all "teigne." Weak lotions, containing muriate and nitric acids, have been much recommended. M. Biett has found an ointment, composed of a scruple or half a drachm of ioduret of sulphur with an ounce of lard, and rubbed on the parts affected night and morning, the most efficacious of all topical applications; in a few weeks so modifying the diseased action of the skin, as to prevent the formation of new pustules, and to cause a growth of hair. When the eruption is on the body and limbs, baths, especially those of sulphur, are useful. When the disease is local, and consists of a few scattered pustules, after detaching the scabs, the surface should be cauterized with nitrate of silver. In all cases great perseverence is necessary both on the part of the physician and the patient.

Porrigo Scutulata, Ringworm of the Scalp, Scald Head. This differs from porrigo favosa in the position of the pustules, instead of being distinct and isolated they are always in groups, forming circles, in the circumferences of which the small yellow favi are in greater numbers than in the centre. They are preceded by red circular spots, and are accompanied by severe itching. The incrustations are at first thin, subsequently they become thicker, and so extensive that in old cases the whole scalp appears covered with a thick "calotte," the circumference of which bears evident marks of the first form of the eruption, such as small but defined parts of numerous circles; there are no hairs except at the union of the scalp with the skin of the face, and these are thin and lanuginous, forming a kind of corona; the eruption itself at this stage does not present the cup-like depressions of porrigo favosa, but yellowish-grey, dry incrustations, which are detached in small portions, having the appearance of coarsely powdered mortar. When the disease is more partial the pustules are sometimes found in all their different stages. The description of the pustules of the porrigo favosa, in their early state, applies to these. The hairy scalp is the special situation of porrigo scutulata; at the same time it may be found on the forehead and neck. It is very rarely seen on the

body, and when it appears there, it is generally the result of direct contagion.

Diagnosis. The only species of porrigo with which this eruption can be confounded is the porrigo favosi. it differs from the others (so called by some authors) by the nature of the pustules (favi), the color and form of the incrustations, the baldness which it produces, and its contagious character. The primary pustules of porrigo scutulata are like those of porrigo favosa, small, yellow, set deeply in the skin, and depressed in the centre; but in the former the pustules are agglomerated into circles, whilst those of the latter are at first distinct, and when united never form regular figures. When the incrustations of porrigo scrutulata cover the head they are more likely to be confounded with a similarly extensive eruption of porrigo favosa, but the large incrustations of the latter are never bounded by defined margins, and if carefully examined some cup-like depressions will be found: whilst defined portions of circles are always seen around the circumference of the eruptions of the former, there are no cup-like depressions, and the dry and detached pieces of the crusta have the appearance of broken mortar. Impetigo figurata of the hairy scalp may be mistaken for porrigo scutulata, or this latter eruption on the limbs may be confounded with the former; as the pustules of impetigo figurata are agglomerated, forming thick scabs, regularly circumscribed, and sometimes circular; but the pustules of impetigo are superficial, slightly prominent, placed on a red and very inflamed surface, containing a liquid which slowly thickens, and forms a true scab at the end of some days; whilst those of porrigo scutulata are more deeply set in the epidermis, accompanied by a slight inflammation at their base, and containing a matter which is concrete almost at their first appearance; again, in a later stage, the scabs of impetigo are much thicker, and after they have fallen off are reproduced by a sero-purulent discharge from the inflamed surface, whilst the incrustations of porrigo scutulata are never reproduced unless by a new formation of favi. Impetigo figurata usually occupies but a small surface, the patches are isolated, it is not attended by loss of the hair, it is not contagious; porrigo scutulata is but rarely seen on the limbs, and then it generally is found at the same time on the hairy scalp.

The treatment to be pursued is precisely similar to that recommended for porrigo favosa. As it is highly contagious care must be taken that the cloths and sponges employed should not be used by uninfected individuals.

Porrigo Larvalis of Willan (Teigne Neuqueuse, Alibert.)—This non-contagious eruption, the crusta lactea of authors, has been well described by Batemen, who considered that it should

be denominated impetigo larvalis. M. Biett considers it to be a form of impetigo, or eczema impetiginodes.

Treatment. In the greater number of cases tepid and emollient washes are alone required; in young infants it is sufficient to direct the nurse to eject the milk from the breast itself on the diseased surface. If the child is older, and there is much inflammation, a few leeches behind the ears; if it occupies the scalp, the hair is to be cut short, and the scabs detached by bread and milk or potatoe poultices. If it has become chronic, lotions containing a drachm of sulphuret of potash, and two drachms of sub-carbonate of potash or soda in a pint of water are useful in modifying the state of the skin. When it affects the trunk, sulphur baths, or sulphur douche baths are beneficial. Gentle laxatives may be given.

Papulæ.

M. Biett recognizes two forms of papulæ, lichen and prurigo; he conceives strophulus to be a lichen which affects infants; and as Dr. Willan has divided them merely from the one form affecting children, and the other adults, not from any distinction in their primary forms, this more accurate classification is to be preferred for its simplicity. Lichen is an eruption of full, solid, elevations, generally very small, sometimes slightly red, but most frequently of the color of the skin, almost always agglomerated and accompanied by itching. It is not contagious. It has two well-marked forms; lichen simplex and lichen agrius.

1st. Lichen simplex. This may be either acute or chronic.—If acute, the papulæ which are very small, and agglomerated in larger or smaller numbers, are slightly red and inflamed, accompanied by heat and itching; at the end of three or four days the redness diminishes, a slight desquamation takes place, and the disease terminates in about a fortnight, unless there are successive eruptions; it appears usually on the face and trunk. In the chronic form, which is the most common, the papulæ are of the color of the skin, or of a light red color; they are preceded by slight itching; the small elevations are readily felt by the fingers, giving the sensation of small hard bodies placed immediately beneath the upper skin. It is a very tedious complaint, remaining many weeks or months. The extremities and the dorsal surface of the hands are the situations on which it is found. It is seldom preceded by general symptoms. The papulæ are sometimes traversed by hairs (lichen pilaris, Willan); in individuals weakened by misery and privations they are livid (lichen lividus), but this is very rare; instead of being irregularly scattered the

papulæ sometimes form regular circles, augmenting at their circumference by new eruptions, whilst the centre heals (lichen circumscriptus). M. Biett has described another species, the lichen gyratus, from the regular and twisted form produced by the groups of papulæ, which may be confounded with psoriasis gyrata. There are also two important varieties, the lichen urticatus and lichen strophulus, which includes the varieties of strophulus of Willan; both these forms are so well described by Bateman, that it would be superfluous to go into any detail here.

2d. Lichen Agrius. This may exist spontaneously, or succeed to simplex. Numerous small elevated papulæ, very red and inflamed, are formed on an erythematous surface; the surrounding skin is inflamed and painful; instead of these symptoms diminishing on the fourth day, as in lichen simplex, the inflammation augments, the papulæ increase in size, their summit ulcerates, a sero-purulent liquid is formed, which produces small yellowish elevated scabs, not rough but soft, and but slightly adherent.—Sometimes the inflammation ceases, and the eruption terminates by disquamation in about a fortnight. The itching is so troublesome that the disease is aggravated by the constant scratching which it induces. It sometimes becomes chronic, and the scabs are replaced by a branny exfoliation, accompanied by a chronic thickening of the skin; this state may last many months.

Lichen affects all ages; it commences usually in the Spring and Summer; arising frequently from a disturbed state of the general health, or from direct irritating applications.

Diagnosis. Often difficult. Lichen simplex may be confounded with eczema, scabies, and prurigo. The papulæ of prurigo are situated, similarly to those of lichen, on the extended surfaces of the limbs, but they are larger and flatter; the summit of many is covered by a black scab formed of dried blood produced by the scratching of the patient: the pruritus in prurigo is more burning and excessive than in lichen, which is frequently very slight. Lichen circumscriptus may be mistaken for herpes circinnatus, but the circles of herpes are more inflamed, and those of lichen, although more elevated, are often of the color of the skin. Papulæ can be found in the centre of the patches of lichen circumscriptus, whilst the skin in the centre of herpes circinnatus is perfectly healthy. When the vesicles of herpes cannot be seen, numerous small round points surrounded by a narrow white border, which formed the base of each vesicle, are found.

Lichen urticatus may be confounded with erythema papulatum, but the patches of this eruption are larger, less red and elevated, and never are accompanied with the severe itching with which the other is attended; it differs from syphilitic

lichen from the absence of the coppery color: this eruption is slower in its progress, and is never attended with pruritus. The diagnosis between lichen simplex and eczema and scabies has been given in the descriptions of those eruptions. Lichen agrius may be confounded with acute and chronic eczema, impetigo and psoriasis. But the thin, soft, and slightly adherent scabs are very different to those of impetigo; and besides, papulæ may be found around the margin of the eruption. The scales of psoriasis are larger than the branny exfoliations of the chronic form of lichen agrius. The difference between this and eczema have before been pointed out.

Treatment. The acute form of lichen simplex requires merely diluent drinks, tepid or cold bath; when it is chronic, slight laxatives, alkaline or sulphur baths, and sometimes frictions, with ointments composed of calomel, ʒss. camphor, gr. xij. lard ʒj. or of 12 grs. to a scruple of proto-idoduret of mercury with an ounce of simple ointment. The antiphlogistic treatment, with general or local bleedings, emollient poultices, and tepid baths, is to be employed in the first stage of lichen agrius, if attended with much inflammation, also purgatives of calomel and castor oil. If the eruption is obstinate, arsenical preparations, such as Fowler's solution, five drops of which is to be taken daily, and gradually increased to 25 or 30 drops, watching its effects on the bowels with great caution, and suspending it when at all necessary; the local applications are similar to those recommended in the chronic lichen simplex.

Prurigo. Both the divisions of this troublesome complaint, and the treatment, as laid down by Bateman, are followed by Biett. In prurigo pedicis the cinnibar fumigations have been found very benefical, but as they diminish the strength of the patient when the whole body is subjected to their influence, M. Biett has introduced into the Hôpital St. Louis an apparatus by which the fumes are applied only to the part affected.

Squamæ.

The classification of Willan is followed, no alteration having been made in the number of genera.

Lepra. M. Biett recognises but one form of lepra, the lepra vulgaris of Willan; the lepra alphoides differs from it only in the lighter color of the patches, owing to the eruption affecting the young and feeble; lepra nigricans is a scaly syphilitic eruption. As the description of lepra vulgaris coincides exactly with that given by Bateman, we shall pass to its diagnosis. Porrigo scutulata at the commencement, or after the incrustations have fallen off, leaving a red annular surface, may, for a short period, be

mistaken for lepra vulgaris affecting the scalp; but, by watching its progress, the eruption of favi, the nature of the incrustations, the destruction of the bulbs of the hair, and the contagious character of porrigo, will sufficiently distinguish the two affections. The tubercular syphilitic eruption, from the circular form which it sometimes assumes, may be mistaken for lepra; but, on examination, the circles will be found not to be continuous, but formed of isolated tubercles, having distinct intervals left between them; these tubercles are shining, elevated, not covered with scales, or at least, in some few cases, but partially covered with extremely small and hard lamellæ; besides the coppery or violet tint, the cicatrices which are generally found in the neighborhood of the eruption, and the concomitant general symptoms, render the diagnosis more easy. Lepra vulgaris is usually distinguished from psoriasis with much facility by the irregular patches of the latter eruption; but the circular spots of psoriasis guttata may be confounded with lepra, particularly when this eruption is declining: on careful examination, the spots of psoriasis guttata will be found to be less regular in their shape, always smaller, and presenting no depression in the centre, free from scales. When, during an extensive eruption of lepra, the circles unite and become confounded, they may simulate the irregular patches of psoriasis, but parts of distinct circles will be found around the circumference.

Treatment. M. Biett has found the three following methods most successful in this frequently intractable complaint. 1. By purgatives, according to the treatment of Hamilton. This is used when the eruption is recent and not excessive; and particularly when it affects children. The most useful purgative is four grains of calomel, with the same quantity of powdered jalap, administered every morning; it is not unusual to obtain a cure by this method in two months, and it rarely salivates. In some cases, a daily dose of ʒij. or ʒss. of sulphate of magnesia or soda, given in a weak bitter infusion, is sufficient: at other times more drastic purgatives, as aloes, colocynth, and gambouge, according to the strength of the patient and state of the eruption. 2. By tincture of cantharides. The effect of this is often surprising when given in cases which have resisted purgatives where the eruption is of great extent and the constitution feeble. The patient should be restricted to a low diet, and from three to five drops should be given in a tea-spoonful of water every morning; this dose should be gradually increased, adding to it five drops every six or eight days, and watching with care its effect on the digestive and genito-urinary organs; if it produces nausea, heat in the epigastrium, ardor urinæ, erections, &c. (which are seldom caused by it,) its use must not be persevered in until these

symptoms decline; in this cautious manner, the daily dose may be gradually increased to twenty-five or thirty drops; frequently, and particularly in females, the eruption is wholly cured by this medicine in 45 or 50 days. A case of lepra at the Hôpital St. Louis was cured in one month by this tincture, which had existed for 18 years. 3. By arsenical preparation. Where lepra has existed many years, where it covers great part of the body, and produces a chronic thickening of the skin, arsenic is of signal service. Three drops of Fowler's solution every morning, gradually augmented to twenty or twenty-five, beyond which quantity it is improper to administer it, or twenty minims of Pearson's solution, increased gradually to a drachm, are the most convenient forms for administering arsenic. Great care must be paid to its action on the digestive organs. The most useful topical application is the ointment of ioduret of sulphur, particularly in cases in which energetic internal remedies are prohibited by the weak state of the patient. Sulphur-baths and vapor-baths very beneficially assist the action of the other remedies.

Psoriasis. The four varieties of this eruption and their descriptions, agree precisely with those of Willan and Bateman. The treatment to be employed is that which has been recommended in lepra. In psoriosis inveterata, M. Biett has administered with success a preparation of arsenic, known in France by the name "pilules Asiatiques;" this consists of fifty-five grains of protoxyde of arsenic, mixed with nine drachms of pepper, and made up into eight hundred pills, each pill contains about 1-30th of a grain; one pill must be commenced with daily, and the dose increased to two, but never more. He has also found very minute doses of arseniate of ammonia, such as the 30th of a grain given daily, remove, in a short time, this inveterate eruption. In psoriasis palmaria, as well as in other local varieties, much advantage has been derived from frictions on the diseased surface, which has been previously softened by warm emollient baths, with ointments containing the proto-ioduret of mercury, or the ioduret of sulphur, in the same quantities before prescribed.

Pityriasis. The descriptions and treatment are similar to those of Willan and Bateman, with the exception of pityriasis versicolor, which our authors call an ephelis; Bateman, although he has followed Willan in his arrangement of varieties, considers that these two eruptions differ but little, and that pityriasis versicolor frequently degenerates into an ephelis. The desquamation following chronic eczema and lichen may be confounded with pityriasis; but the vesicles of the first or their remains, and the papulæ and thickened skin of the second eruption, as well

as the constant renewed formation of the scales of pityriasis, which never happen in the others, sufficiently distinguish them.

Ichthyosis. Both M. Biett and M. Alibert consider that this eruption is most frequently congenital and hereditary; this is not mentioned by Bateman; he merely states "that it often commences in childhood, and often in early infancy." When congenital, the skin of the newly-born infant, instead of presenting a smooth, polished surface, is dull, thick, and furrowed, or remarkably dry, and covered by small scales of a grey color, formed by the exfoliated epidermis; as the infant becomes older, the characters of the eruption are more marked: these are admirably described by Bateman. M. Biett considers that congenital icthyosis is a disease incurable by medicine; palliatives may be prescribed, such as mucilaginous baths and lotions, vapor-baths, &c. to render the skin less dry and hard; indeed, in the other forms of icthyosis these are the only means which have been found serviceable at the Hôpital St. Louis. In the post mortem examinations of those who have been effected with icthyosis, no organic disease has been discovered which could be connected with the eruption; indeed the patients usually enjoy good general health.

Tuberculæ.

M. Biett admits only three classes—elephantiasis of the Greeks, frambœsia, and molluscum.

Elephantiasis of the Greeks. The term "elephantiasis" has been indiscriminately applied, by many modern writers, to a tubercular eruption and to a chronic enlargement of the cellular tissue of the leg, which, from its being an endemic complaint in an island of the West Indies, has been called "the Barbadoes leg." Dr. Bateman, in his learned history of elephantiasis, has endeavored to reconcile the descriptions of the ancients with those of the more modern authors, and has decided that the Greeks applied the term ελεφας and ελεφαντιασις to a tubercular eruption (a very accurate drawing of which he has given in his quarto volume of plates), and that the Arabs have described by the same name a chronic enlargement of the skin and cellular tissue of the legs. Dr. J. Mason Good has stated that "dal fil" is the common name for the swelled leg, in the present day, among the Arabians, who sometimes contract it to "fil" alone, literally "elephas." The confusion was still more increased, by the translators of the works of the Arabian physicians into Latin, naming elephantiasis, the "Arabian leprosy." Elephantiasis of the Greeks is placed among tuberculæ, that of the Arabs in the anomalous orders. The description which Dr. Bateman has given of this tubercular eruption is, as he candidly acknowledg-

es, drawn from books, as he had seen but four cases. The following description is drawn up from the lectures of M. Biett, who has had more opportunities of observing this eruption.—The face and limbs are most frequently the seat of the eruption. The tubercles are preceded by dark spots on the skin of whites, of yellowish or reddish on blacks; they are at first elevated, irregular, red or livid, and soft, from the size of a pea to that of a nut; sometimes indolent, at other times acutely sensible; the intervening skin is hypertrophoid, causing great deformity. The eruption may remain stationary for a long time or make rapid progress, the whole face being covered by knotty tumors, divided by deep furrows; the nostrils become dilated, the nose, lips, and ears monstrously enlarged; the eyebrows and ciliæ fall out. The limbs are oily and shining, covered with enormous flattened tubercles; the subjacent cellular tissue is tumefied; the sensibility, which was in the first instance excessive, gradually diminishes until all feeling is lost, as well as the voice and smell, whilst the senses of vision and touch are singularly deteriorated; the moral energies are similarly weakened and depressed. The "libido inexplebilis" which is said to accompany this disease, has not been observed in the cases admitted into the Hôpital St. Louis. In the most severe cases the tubercles ulcerate, the foul ulcers pour out a sanies which forms adherent blackish scabs. The mucous membrane lining the mouth and covering the tongue, as well as that of the conjunctiva, is covered with tubercles. On examinations after death, the gastro-intestinal mucous membrane is almost always discovered to be in a diseased state, and the immediate cause of death is, in the greater number of cases, extensive ulceration of the ileum, the ileocæcal valve, and the colon. The tubercles on the membrane lining the mouth are found ulcerated, and they are sometimes traced as far as the ventricles of the larynx. Tubercles (that is pulmonary tubercles, as described by Laennec, &c.) are found in the lungs and mesentery; Alibert and Ruette have described the bones, in some cases, as soft and spongy. Elephantiasis is often hereditary, but not invariably so. M. Biett attended a West-Indian lady who gave birth to several perfectly healthy children during the progress of this disease. Almost all the individuals met with in France, affected with elephantiasis, are natives of the colonies.

Prognosis. It is always a serious disease; usually a fatal one. The patients, morose, sad, debilitated, discouraged, and totally deprived of the greater number of their senses, are destroyed by a slow fever; or, from an extension of the eruption along the mucous surfaces, death is produced by the most intense chronic gastro-enteritis. In some rare cases, where the eruption is recent and of small extent, the tubercles are gradually absorbed.

Treatment. If the individual affected with tubercular elephantiasis applies for relief at the commencement of the disease, dry frictions, liniments, and particularly blisters, are to be employed, to increase the vitality of the skin. When the eruption is more advanced, but still circumscribed, as, for example, to a part of the ear, frictions of an ointment composed of hydriodate of potash, ℈j., lard, ℥j., or douche vapor-baths, directed on the part for 15 or 20 minutes daily. When more extensive, and the general health permits it, sudorifics, tincture of cantharides, and arsenical preparations, in the doses recommended in lepra, may be tried. When the mucous membranes are attacked, soft mucilaginous drinks, low diet, opiates, &c. are to be substituted. It is always advantageous to change the climate.

Frambœsia—the Yaws. This tubercular disease, which is indigenous in Africa, and very common in the West Indies, has been met with more than once by M. Biett in France. It is well described by Bateman.

Molluscum. Nothing has been added to the description of this disease given by Bateman; M. Biett has never seen the contagious variety. A case confirming the two cases of contagious molluscum, given by Bateman, was communicated to our authors by Dr. Carswell (now a Professor at the London University,) which fell under his inspection in Edinburgh.

We must make the consideration of Maculæ, and the anomalous orders, the subject of another article.

Art. XVI. *Observations on the proximate cause of Inflammation.* *By* Horatio G. Jameson, M. D.

We commenced a series of Essays on Inflammation, in our second volume, page 545. We there treated of the definition, and, in continuance shall now speak of the proximate cause.

It has been justly remarked by Dr. Thompson, speaking of the various opinions on inflammation, that "there are, in all these different hypothesis, certain points of agreement as well as of variance. Each admits that inflammation has its seat in the capillary vessels of the inflamed part, consequently that the capillary arteries are much dilated." This remark is truly important since its admission goes to fix beyond doubt the fact, that in whatever way the capillaries are concerned, they are, in reality, the seat of inflammation. But to me, it appears not more true, that inflammation is seated in these vessels, than that all attempts at explaining the phenomena, have been unsuccessful.

By the term proximate cause, is generally meant, that condition of the part affected upon which the phenomena essential to inflammation, depend.

"It is said to be that peculiar action in the parts which constitutes the very beginning of inflammation, and sustains its progress. It is, in short, that without which the disease cannot exist, and which existing, the disease must exist also." Mr. S. Cooper says, that according to this view, the proximate cause is only another name for the process itself, and from which Dr. Thompson observes, "it neither can, nor need be distinguished."

Dr. C. H. Parry, speaking of this view of the proximate cause of inflammation, says, "In such an explanation, the proximate cause is, strictly speaking, a part of the disease, which implies the absurdity, that a thing is the cause of itself. The very name of causa proxima, or that which is nearest to any thing, shows that it cannot form a part of that thing, unless we admit that a thing can be at the same time a part of another, and not a part of it. Causation, according to our conceptions respecting it, implies not only difference and separation, but priority." And he offers the following explanation as being more satisfactory to his mind. The proximate cause, according to Dr. Parry, is, "that phenomenon in the body, or part, immediately preceding the state which we call disease, without which previous phenomenon the disease is not known to exist."

To me this definition is more unsatisfactory than that in common use, since it is obvious that a process made up of different and successive phenomena, cannot be caused by any individual thing or principle. Inflammation being made up of a suit of phenomena, no principle which may serve to usher in the disease, can be the ruling cause throughout its course.

To make a strict, or indeed a just application of the term proximate cause, according to this definition, each stage of inflammation, viz: that of pain, intumescence, suppuration, and absorption, must have their respective and peculiar proximate causes.

The ancients have left us but little information on the subject of inflammation, particularly as regards its theory, we may therefore, first, notice the opinion of Boerhaave, on account of its very general prevalence. This author, after Galen, contended that the proximate cause of inflammation existed in the blood, and humors, (as the other animal fluids were then termed.)—Boerhaave, availing himself of the speculations of his day, kept up by what were called experiments, invented a theory which requires a brief notice, from the fact of its having captivated a large portion of the learned in the profession; and from its having

been tanght, in some of the schools almost down to the present day.

Leeuwenhoek, was somehow led to imagine that he was extremely sharp-sighted, and he was thus led to discover, as he supposed, by his microscope, that a globule of blood is composed of six yellow globules, which last are themselves formed by the union of six serous globules. These experiments turn out to be delusive; and the power of thus dividing globules, is now referred to mere fancy.

The fertile genius of Boerhaave, took hold of these specious notions of Leeuwenhoek. He contended that each capilliary at its end divided into two branches, of which, one continued into a vein; and the other, was the principal trunk of a lymphatic artery. That each lymphatic artery divided in like manner into two branches, of which one formed a lymphatic vein, and the other the principal trunk of a serous vessel. He even admitted the existence of spirituous vessels, which arose from the division of the serous. He imagined that the vessels are conical, and receive, in their healthy state, those globules only, which are suited to their size. That is, the red globules do not pass into the lymphatic vessels; these only admit the yellow or second order of globules. Serous globules can only be admitted into the serous vessels. But when a red globule, by any force whatever, is introduced into a vessel not destined to receive it, this globule, unable to advance by reason of the tapering, or conical form of the vessel, is arrested, and causes an obstruction of blood in the part. The blood, stopping in the extreme vessels, gives rise to what he called error loci, which he considered the proximate cause of inflammation. It would be a waste of time to stop to investigate a theory so mechanical, which is to explain the phenomena of the living body. Suffice it to say, that if any such arrangement of vessels existed, in the living body, it would be easy to demonstrate the fact, by mercurial injection; but so far is this from being the case, that mercury will not pass directly from the arteries into the lymphatics. And the microscopical experiments, relied on, have not been verified by other observers: nothing but red globules are to be seen in the present day. In short, with Boerhaave this error loci, or misplacement of the blood, is considered the proximate cause of inflammation: but, according to his views, the error of place is owing to depraved blood.

Boyer contents himself by simply saying, that "the proximate cause of inflammation, is the afflux of blood and its engorgement into the capillaries of the part affected."

The proximate cause of inflammation, has been ascribed to spasm, by Cullen and others. Some have contented themselves by simply saying, that it is owing to a phlogistic habit—but we

know that all persons, of whatever habit, are subject to inflammation. Van Helmont seems to have had pretty correct views in assigning irritation, as the proximate cause of inflammation. But we may go far into antiquity for this opinion. The father of our science never said a more important and correct thing, than when he says, ubi, dolor ibi fluxus, where the pain and irritation is, there also is the humor, by which he meant the secretions peculiar to inflammation. Thus it is known, that if we irritate the web of a frog's foot, by passing through it some sharp body, or expose the part to heat, by means of a burning mirror, or otherwise—the blood will be seen to flow from all parts around to the irritated point; and, of course, it must move in a direction, in many of the vessels, different from its natural course.—If the injury be not too considerable, or long continued, the part will soon recover, the vessels will resume their natural action. But if otherwise, inflammation of more or less intensity will be the result, as the injury shall have been more or less.—Again, if a person of a fair skin be stung by a bee or the like, there will be seen, first, a red point, the irritation and redness will extend from the centre to the circumference: swelling soon succeeds, and all the usual phenomena of simple inflammation, in some habits, will be the consequence. These facts, taken in connection with what has been said upon irritation, will serve to convince us that the proximate cause of inflammation is irritation; and, our observations will lead us to draw the conclusion, that, in most instances, the inflammation will be shaped by the nature of the irritation. We must however make allowances for idiosynocracies, and occasionally for accidental circumstances. Thus Erysipelas, Syphilis, Variola and the like, are each the result of peculiar irritations. On the other hand, inflammation from cold, and some other remote causes, may give rise to different diseases, according to governing circumstances—cold may in one person excite rheumatism, in another catarrhal affections, in a third peritonitis, &c.

I have said that irritation is the cause of inflammation. What then do we mean by irritation? It is a phenomenon every day presented to us, in the peculiar changes which are manifested, by swelling, or pain; and, if external, there is mostly afterwards redness. I have laid it down, when treating of irritation, as a fact to which there are but few exceptions, that parts must take on irritation of sensation before inflammation can take place.—Of the essential nature of irritation, we know nothing, although we constantly observe its movements or attendant circumstances. I have, in my observations upon temperaments and irritation, endeavored to prove that irritation is always referable to the sensorial power in some of its modifications.

Whether we admit the opinion of Harvy and others, that the heart has the power of propelling the blood throughout the system, or with Hunter that the arteries, and especially the capillaries, greatly contribute. Whether we believe in the spasm of the capillaries of Cullen and others, or the venous congestion of Armstrong, or in a congested state of the capillary arteries according to others, we still see, as has been observed by Dr. Thompson, that all look to the capillaries for the proximate cause of inflammation, not even excepting the theory of Galen and Boerhaave. These authors, while they ascribe much to the state of the blood, believed that there was relaxation or dilatation of the extreme vessels, by which the latter supposed that error loci takes place.

Having, as I think, now brought the subject fairly into view, I shall recur to a fact already stated, i. e. If a bee inflict a sting, upon a fair thin skin, a red point will be seen; from this point, as the centre of irritation, the redness will extend so that it is obvious the blood is interrupted in its course on all sides of this centre. This is a fair example of all irritation, for they all alike affect the capillary vessels, and the blood being thus interrupted in its motion, the process of assimulation must necessarily be interrupted.

Before proceeding farther with this explanation, it seems necessary to bring to view some physiological opinions, very generally, if not universally, admitted, in the present day.

1. There is a perpetual renewal of parts going on throughout the system, and consequently there muat be a proportionate absorption.

2. This process of renewal and absorption, operating upon the ultimate atoms, of which the body is composed, can only be affected by an actual decomposition of part of the blood, i. e., by changes in its chemical constituents only, can we explain the phenomena attending the dismissal of recrementitious particles, and the election of new ones, in the constant renewal of the solids.

3. While a portion of the blood passes but little changed from the capillary arteries, to anastamosing veins, a considerable portion is decomposed in the extreme vessels; part becomes organized, and thus are these vessels perpetually formed out of the blood, and a refuse mass passes into the lymphatics, while the surfaces of internal cavities, and other parts, are perpetually moistened, by some part of the blood.

4. Whatever evidence may seem to present itself in favor of the process of sanguification, being accomplished in the lungs, there seems to be incontrovertible proof of the blood being decomposed, and reformed in the capillary vessels, by which it ac-

quires the properties of venous blood. All these phenomena are the work of the vis plastica, fully noticed in my observations upon animal life.

Let us then suppose a part in a state of health, the blood is distributed through the extreme vessels—it passes even here with considerable celerity, and presents one of the most surprising and interesting phenomena, in the whole animal economy, since notwithstanding its rapid movements, the plastic powers are in full play. Is it any wonder, that amid a structure so delicate, so complex, and among changes affecting alike the solids and fluids, that the whole may be easily thrown into disorder. Suppose some injury has been done to a part, the nervous energies of it are disturbed, which is manifested mostly by pain; may we not look for disturbance in the healthy operations of the extreme vessels, and consequently in the blood under such circumstances.

The health of the part depends upon the perpetual assimulation of the blood to the purpose of making solids, and upon the proper making of those solids depends the proper circulation of the blood—disturb the nervous energies, and you have irritation; let this amount to a certain extent, and there is necessarily produced what may be called a læsio sanguinis.

The nervous influence in a part being such as to interrupt the plastic operations, the blood undergoes new changes, the solids no longer receive their wonted pabulum, and the whole economy of the part is changed.

It remains to give a summary of my views of all the phenomena connected with the proximate cause of inflammation.

It is a fact requiring no proof or illustration, that inflammation, which is the result of certain morbid phenomena, can only take place in certain living tissues. These tissues deprived suddenly of their vitality, as by exposure to cold or otherwise, run into mortification. They are also liable by inflammation happening in depraved habits, or by wrong treatment, or neglect in good habits, to run into mortification. It is manifest, therefore, that inflammation must be, so to speak, a war upon the living tissues or organs, and their economy. What are we to think of the very common opinion, in the books, that inflammation is often a salutary occurrence. Such an opinion is too obviously erroneous to pass for sound doctrine.

The human body is maintained in its vital integrity by a plastic or assimilating power. And no matter what the dissimilarity in the organization of the different tissues, they are all alike the product of the same plastic power, which is diversified to suit each tissue. This power carries on its operations, as it were, in secret; and we only recognize its existence by the mechanism

which is made, sustained, and shown in the figure or conformation of our bodies.

This power, located as it is in corpuscular parts of the human body, may readily be supposed to act with equal facility, and with equal effect, upon the solids, and the accretive fluids. Its operation must be carried on, by a kind of double elective attraction. Suitable corpuscules constantly arriving, they are, by some inscrutable motion, elected into use; and while the fluids, in which these accretive corpuscles arrive, are adducted into office, to serve their turn of duty, the same fluids give the power of abduction, to the recrementitious corpuscules. But the power by which these concealed operations are kept up, would soon fall into ruin, if there was not a supplying and a removing apparatus. Of this power I have spoken in former lectures—I allude to the power of circulation.

I have elsewhere endeavoured to prove, that by these two powers the body is formed and sustained, in its organization and life. It is therefore an inseparable inference, that all the tissues and parts in their corpuscular and organized forms, must be sound; and, that, in addition to this, there must be a vivific principle, influencing all the corpuscules, both medullary and common. Health consists in the full harmony, and sanity of all these corpuscules, organs, tissues, and vivific principles. Experiments, which need not be here detailed, prove that there is no life without medullary corpuscles, in some form of associated organization. Now let us suppose all these in their integrity, and that some injury is done to a part of the body—if the injury is considerable, all the structures, and all the animating powers will suffer. If the injury be slight, as a slight burn or scald, amounting to a rubefacient effect, the nervous structures or medulla will alone be disturbed. The medulla in all its forms, I have already said, is the first link in the catenation of life. All the powers, and all the corpuscules, in their individuality, and in their aggregate forms, being dependent on this first link in the catenation, all must suffer in proportion to the sufferance of the medulla. In other instances, the consequences of injuries, as by poisons, or by violent mental excitement, will depend upon the amount of interruption of the vital or animating principle. A small portion of the prussic acid will so instantaneously destroy life that we are led to believe, that it destroys the animating principle. So may violent mental excitement lead to phrenitis.

I believe that irritation can only take place in the medulla, but it may exist in all the forms of medullary structure in our bodies, as in the mass of brain, ganglions, nerves, and medullary molecules. If we admit that the first link in the catenation of life is in the medulla, and that the capillary vessels are dependent

upon the nerves, and that all the phenomena of inflammation show themselves in the capillaries, and the disturbance of the nervous power is allowed to be irritation, it seems most clearly to result, that irritation is the proximate cause of inflammation.—But to prove this more fully, it will be necessary to go into a a brief examination of another condition of the human body, of which I have already taken some notice—I mean sensibility.

In treating on sensibility, in a former lecture, I noticed the fact that it is by this property of our nature, that we hold intercourse with external objects—that it is the source of all our enjoyments, and of our pains. It is therefore by this condition, that our bodies are made liable to irritation.

But as sensibility implies perception, and as many of the phenomena of life are carried on in tissues having no perception, connected with their natural and healthy functions, we must distinguish the sensibilities of these tissues, from those having perception, or what Richerand calls perceptibility. Thus as every vital operation is carried on by the medullary influence, and as all the tissues take on sensibility when diseased, as inflamed cartilages, &c., it will follow that these tissues are endowed with the property of sensibility; but in a latent state.—And hence the propriety, and advantage, I think, of distinguishing sensibility, into sensific, and perceptive, as I have done in a former lecture. In tissues having the latent sensibility only, there may be irritation without pain. In these cases, some hurtful agent disturbing the medulla of these structures, they become painful; but pain in these structures is, I believe, always attended by inflammation. So that irritation in insensible structures leads to pain and inflammation; whereas, in the more sensible tissues, irritations are attended *with* pain. There must be a foregoing irritation in both cases, by which I mean a disturbance of the medulla, or what is called nervous or sensorial derangement. And it hardly can be doubted that there must be some disturbance in the insensible tissues or structures, before they become painful; and we cannot doubt of there being some change in the perceptive tissues, when they become too sensible, as they always are before inflammation is formed. We have a right in both cases to say, that there is an aberration from health before the phenomena of inflammation are developed, and this is the condition called irritation, and as it is the immediate forerunner of inflammation, it is the proximate cause of the inflammation.

I have said that the plastic power is the first in operation, in fixing the rudiments of man, and I may now add, that it is the last to yield to the power of death. According to the observations of Mr. J. Hunter, the stomach will act upon itself after death; that is, the gastric juice will sometimes dissolve a por-

tion of the dead stomach. Most persons are acquainted with the fact, that the stomach of young animals, after it is dried and long kept, will curdle milk, as does the living stomach previous to reducing it to chyle. We are assured, by respectable authority, that snails have been dried, and laid by for years, and were afterwards resuscitated by the application of a little water. It has been ascertained that the hair and nails grow somewhat after death. The fact will be recollected that, Dr. Franklin resuscitated several flies in England, after they had been bottled long before with cider, in this country. Many animals are known to lay up during the winter, in a state of torpor. All these circumstances go to prove, that there is a sustaining principle of animation without perceptible motion—certainly without circulation, without respiration, or sensibility.

In regard to perceptibility, the plastic power is the lowest link in the catenation of life, but as relates to sustentation, it is the first, since by it the others are made, and sustained. And it adds, to our well being, that this primordiate link in the catenation of life is the last assailed in disease, and it has been owing to a neglect to examine this power of our nature, that there has been so much speculation and currency in the notion of a vis medicatrix naturæ. This vis plastica is the conservative power of the inmost recesses of our bodies—so that the anima medica of Stahl is, in fact, nothing more nor less, than the natural healthy operations of sustentation.

Upon close inquiry, I think, we shall find that in all cases of inflammation in tissues endowed with perceptibility, as a part of their economy, that pain, and consequently irritation, precedes inflammation. But we must not always look for this state of things in tissues not having the perceptive sensibility in their healthy state. You may sometimes see a bone, a membrane, a cartilage, presenting some swelling—the swelling shall progress, and before there be much pain, there may be incipient inflammation. All this may be accounted for in the explanation I have given respecting the sensific condition of these structures, by which they perform their function—that is, the nervous energies by which they are sustained in their economy, gives the necessary power without perception taking place. This being the case we are not to look for perception until the economy of these structures is much deranged. But so obviously is every part in aggregate life dependent upon the nervous energies, in which I include the medulla in general, that there is no room to doubt, that these less sensible parts are principally dependent on the nervous influence primarily.—And hence we come to the conclusion, that in most surgical diseases the nervous influence as connected with sensibility, or the first link in the catenation of

life, is the first of the powers disturbed in the capillary tissues—and secondarily, the vessels suffer, that is, the arteries, the veins, and the lymphaties, since all these operate through the nervous energies.

This brings us then to a reconciliation with all modern authors, in the opinion that the phenomena attending inflammation are principally referable, so far as cognizable to our senses, to the capillary vessels, as has been remarked by Dr. Thompson, and which has been noticed in this lecture. Let us suppose that a healthy body has been subjected to some injury, as a contusion or other wound, the first effect is pain, and this we know indicates a nervous disturbance; but the capillary vessels being dependent on the nervous energies are prevented by this disturbance from performing their healthy functions. But the vis a tergo not being interrupted in the larger vessels, they continue to bring on the blood—the blood arrives in a compound state, and it is the business of these vessels in their healthy operations, to decompose a part of the blood, in carrying on the formative process. Here is wanted a particle of lymph, there of serum, or a red globule; and from the points into which these are elected, there must at the same time, be thrown off a portion of the solid structures, equal in bulk to the particles received. The attractions and repulsions necessary for carrying on this curious assimilating process being interrupted, by some impairment of the nervous energies, the blood must either pass on undecomposed, or, what I believe is more common, it is separated into its component parts, as far as relates to their admixture, that is, the blood is separated into lymph, serum, &c. &c. floats sluggishly in the vessels, or becomes extravasted, and hence comes the swelling of inflamed parts. But in all these morbid phenomena the parts are only crippled, not dead, they continue their functions more or less disturbed. If the derangement is violent to a certain extent, or if with less violent injuries we have in connection, a bad habit of body, mortification or death of the part will supervene.

The phenomena attending inflammation show us that wherever an injury is succeeded by pain and swelling, that there will next take place an increased force of the vis a tergo—moderate resistance to the arterial circulation is always followed by some increase of arterial action, and hence it follows, that while the nerves are disturbed, the capillaries interrupted, and the blood floats in a part, more or less separated into its lymph, &c. there will be an increased force called up, the tendency of which is to remove the stationary portion of fluids, and in this way may we account for the recovery of the part, without calling in any other

than the different vital forces. Such a recovery in the slighter affections has been termed delitesence—a more considerable affection terminating thus, is called a resolution. But we must also take into the account here, that the capillaries being deprived of their nervous energies, to more or less extent, become relaxed, and of course become enlarged in their size, as has been shown by Mr. Hunter, by injecting the ear of a rabbit which had been frosted. And hence it is that we bring about delitesence, and resolution, by cold applications—these having the effect of increasing the contractile power of the vessels, and thus lessening their calibre. Enough, I trust, has now been said to explain my views of the relative situations of the nervous energies, the capillary vessels, &c. concerned in inflammation; and also to show, what I mean when I say that irritation is the proximate cause of inflammation. It will be more in place, when treating on the phenomena of the different kinds of inflammation, to speak more fully of morbid derangement peculiar to the several stages, and to the several kinds of this most interesting affection—Of all others, the most important to the surgeon.

A few words by way of practical application shall close our observations at this time. If it has been established that nervous irritation is the proximate cause of inflammation, and we know by the most ample experience, that opium will allay pain and irritation, we see of how much importance it may be to give opium freely, in cases of wounds accidental, or surgical. And I can here speak from considerable experience when I say, that in many cases this is of vast importance.

ART. XVII. *Report of the Madras Medical Board on Epidemic Cholera* † (*Drawn up by Order of Government*, 1824.) [*Taken from the London Medico-chirurgical Journal for April* 1832.]

WHEN the Epidemic Cholera seemed to have completed its progress throughout the territories of this Presidency, it was in-

†As the Report of the Madras Medical Board is the latest of the Indian Reports (1824), and consequently had the advantage of the Reports from Bombay and Bengal, so it is, by far, the most valuable. We could not do a greater service to the profession and to the public than by re-publishing this most important document. At the end of the article we shall give a tabular analysis of all the individual Reports from which the aggregate was compiled.

☞We beg particularly to state, that this article is verbatim et literatim from the Madras Report (with the omission of some tabular returns and extraneous matters, for which we have no room), and not a *review* of the Report.—EDITOR.

timated by Government to the Medical Board, that the interests of the medical science and of humanity, would probably be promoted by a history of that disease, as it had appeared amongst the population, as well as amongst the troops; with an account of the various modes of treatment, which had been at different times adopted by different Medical Officers at their respective stations, and the success with which they had been attended.

The Honorable the Court of Directors have also subsequently ordered, that the particulars of the progress of Cholera through these territories, and the different modes which had been adopted in the treatment of persons afflicted with it, should be prepared and printed. In making this communication the Honorable Court stated, *that they had caused the reports which had been drawn up under the superintendence of the Bengal and Bombay Medical Boards to be circulated amongst the most eminent of the Faculty in England:* and the Court expressed their hope, that the circulation of these documents, together with that of a similar report from this Presidency, might tend to produce opinions and advice calculated to check the ravages of this afflicting malady. It is in pursuance of these instructions, that the present report has been prepared.

In addition to the measures for collecting professional information, which the ordinary discipline of the service implies, the Medical Board did not neglect, upon the first appearance of the epidemic cholera, specially to call the attention of all Medical Officers on this establishment, to the necessity of contributing such remarks respecting the disease as their opportunities for observation might enable them respectively to do; and it is a just tribute to the profession, which is gladly and gratefully awarded, to state, that the call has been fully answered by *almost every member of it.* A mass of information has thus been furnished, which leaves to the writer of this report little else than the labor of selection and arrangement. Many valuable communications have been received in a condition, fitting them to be at once offered to the public: and these will accordingly be found under the proper head in this report. Others, forming indeed a great proportion of the whole, though intrinsically valuable, and extremely interesting, are yet drawn up in a desultory manner, and in an insulated form, which precludes the propriety of their publication. In disposing of the contributions of the latter description, the utmost care has been taken to embody the facts and observations contained in them, under the proper heads of pathology and therapeutics. No observation has been set aside *merely* as being improbable; no theory absolutely rejected *merely* as being untenable: for our present state of knowledge with regard to cholera did not appear to warrant the abso-

lute rejection of any medical opinion concerning it. Every alleged fact, and distinct theory, therefore, which have been recorded, find a place in these pages; and are thus left to be tried by the test of time and experience. So scrupulous indeed have the Medical Board been in the exercise of their authority, throughout the course of this destructive disease, that, even at the hazard of incurring the imputation of empiricism, they have give currency to the notice of remedies, and sanctioned their trial, although the exhibition of them might be little supported by any received system of medicine.

It would doubtless in some respects, have been more desirable in an official report, to have published every communication as it had been received, and with the name of its author, rather than to offer a digest of them: but, independently, of the objections that have just been assigned, there existed another, which was, the great uniformity of these reports: for, though all Medical Officers have not been equally fortunate in their opportunities of observation, nor possessed of equal leisure, and an equal degree of zeal in the cause of science, yet by far the greater proportion of the reports, though occasionally relieved perhaps by a diversity of opinion on the *theory*, still present, in respect to the *history* of the disease and general plan of *treatment* a repetition, which it would be altogether unprofitable to publish.—It is perhaps more necessary to offer some apology to those Gentlemen whose reports, written in haste, and on the first appearance of the disease, are now published at this late period: and, had our knowledge of its nature, and method of cure kept pace with the extended means of observation, which the lapse of time has unhappily too amply afforded, there might have been good reasons for objection. The best apology, however, will be found in the reports themselves, which even when contrasted with those written at later periods, and under circumstances in every respect more favorable, will still be found to present most interesting matter, and to redound greatly to the credit of their authors, many of whom are now no more. Whenever supplementary remarks have been received from the same writer, they have been appended to his original communication.

Although no paper is inserted in this report, which is not official, or authenticated, nor any thing advanced, unless founded on materials exclusively of that nature, yet it is nevertheless to be remembered, that medical *facts*, are too often merely medical opinions; their authenticity, in reference to the views of the narrator, is undoubted: but liable, as even the most deliberate and sagacious observers are, to error and misconception, we are bound to receive with due caution and circumspection any *facts*

or *opinions*, which are palpably at variance with general experience. It is presumed, however, that the report will be found, upon the whole, to convey a very considerable and unexceptionable mass of evidence respecting the nature of that species of cholera, which has so long afflicted the Indian community; and, while we sincerely hope that the actual presence of the disease in Britain will never afford more immediate means of judgment, we would still echo the sentiment of the Honorable Court, that the eminent of the Faculty there, may be more successful in their researches into its nature, cause, and cure, than their brethren in this country have been.

While the constitution of the Company's Medical Service is singularly well adapted for the collection of information, this advantage has almost been rendered a dead letter from the want of periodical printed reports; a want the more especially felt in a country where the change of functionaries is rapid and perpetual, and, consequently, where individual or personal knowledge is of less public avail. The evil here complained of has been strikingly exemplified in the instance of cholera, which, on its first appearance, was considered to be merely a severe, or unusual form of the disease known by the name of cholera morbus. This idea, however, being soon, and perhaps too hastily, abandoned, a persuasion was then almost universally entertained, that it was in fact *a new disease:* and, with a strange inconsistency, an expectation seems immediately to have arisen, that the nature of this new disease was more perfectly discoverable than the nature of those diseases, which have baffled the experience of ages; and farther, that a specific cure for it, was no less an object of easy attainment. Hence arose that diversity of opinion, and variety of practice in cholera, which at first generally prevailed, and which, it is feared still continues to exist to a very considerable degree. When it was found that a complaint, similar in all its symptoms, had been described in several European publications on diseases of India, the knowledge of the circumstance was too confined, and came too late to do away the evil, which had arisen. The Indian community, including the Medical profession, were taken, as it were, by surprise: the disease, if not new in reality, was new at least to them: and the pre-existence of cholera, in a form no wise different from that which it has on this occasion assumed, has been somewhat reluctantly admitted, and too much kept out of sight in reasoning on its pathology.

[*Appearance of Cholera in 1787 at Arcot.*] This state of things, however, cannot be imputed to the want of foresight in our predecessors; since we find the following notice entered in

the proceedings of the Medical Board of this Presidency, under date the 29th November, 1787, but which, being confined to a manuscript entry in the records of an office accessible only to its members, it became as has been observed, a dead letter.

"A disease having in October last prevailed at Arcot similar to an Endemic that raged amongst the natives about Paliconda in the Ambore valley in 1769–1770, in an army of observation in January 1783, and in the Bengal detachment at Ganjam in 1781, and several other places at different times, as well as Epidemic over the whole coast in 1788, under the appearance of Dysentery, Cholera Morbus, or Mordyxim, but attended with spasms at the præcordia, and sudden prostration of strength as characteristic marks; seeing this Board is ordered to be a record, the Physician General recommends as a guide to future practitioners, that a letter from Mr. Thompson, Surgeon of the 4th Regiment, containing an account of the dissection of one of the patients who died of the disease, describing the state of the viscera, may be entered on the face of the proceedings, together with two letters from Mr. Duffin, Head Surgeon at Vellore; and one from Mr. Davis, Member of the Hospital Board, containing an account of the causes, symptoms, and successful treatment, of the sick, by the use of the hot-bath, and fomentations, supporting the vis vitæ with wine, &c., and removing the putrid culluvies from the intestines. The Hospital Board, sensible of the advantages that may result to the service from the mode proposed by the Physician General, direct their Secretary to enter the Letters he has mentioned as follows."

[*Noticed by Bontius in* 1629.] The Dutch Physician Bontius, who wrote in the year 1629, at Batavia, thus describes cholera morbus. "Besides the diseases above treated of as endemic in this country, the cholera morbus is extremely frequent; in the cholera, hot, bilious matter, irritating the stomach and intestines, is incessantly, and copiously discharged by the mouth and anus. It is a disorder of the most acute kind, and therefore requires immediate application. The principal cause of it, next to a hot and moist disposition of the air, is an intemperate indulgence of eating fruits; which, as they are generally green, and obnoxious to putrefaction, irritate and oppress the stomach by their superfluous humidity, and produce an æruginous bile. The cholera might, with some degree of reason, be reckoned a salutary excretion; since such humors are discharged in it, as, if retained, would prove prejudicial. However, as by such excessive purgations the *animal spirits are exhausted, and the heart, the fountain of heat and life, is overwhelmed with putrid effluvia, those*

who are seized with this disorder generally die, and that so quickly, as in the space of four and twenty hours, at most.

Such, among others, was the fate of Cornelius Van Royen, steward of the Hospital of the sick, who being in perfect health, at six in the evening, was suddenly seized with the cholera, and expired in terrible agony and convulsions before twelve o'clock at night; the violence and rapidity of the disorder surmounting the force of every remedy. But if the patient should survive the period above-mentioned, there is great hope of performing a cure.

This disease is attended with a weak pulse, difficult respiration, and coldness of the extreme parts; to which are joined, great internal heat, insatiable thirst, perpetual watching, and restless and incessant tossing of the body. If together with these symptoms, a cold and fetid sweat should break forth, it is certain that death is at hand.

In treating of the "Spasm," this author gives the following account. "The disorder of the Spasm, almost unknown with us in Holland, is so common in the Indies, that it may be reckoned among the popular and endemic diseases of the country. The attack of it is sometimes so sudden, that people become in an instant as rigid as statutes; while the muscles either of the anterior or posterior part of the body, are involuntarily, and violently contracted. A terrible disorder! which, without any primary defect of the vital or natural functions, quickly precipitates the wretched sufferer in excruciating torment to the grave; totally deprived of the capacity of swallowing either food or drink. *There are, likewise, other partial Spasms of the limbs;* but these being more gentle and temporary, I shall not treat of them.

People affected with this disease look horribly into the face of the by-standers (truculente admodum astantes intuentur) especially, as often happens, when the cynic spasm comes on, and both the cheeks are drawn in convulsion towards the ears; a red and green color is reflected from the eyes and face; (ruber et viridus color ex oculis et facie *oritur;*) the teeth gnash; and instead of the human voice, a rude sound issues forth of the throat, as if heard from a subterranean vault; so that to those unacquainted with the disorder, the person appears to be dæmoniac."

In speaking of cholera, Bontius no where mentions the *color* of the matters evacuated. He talks indeed of æruginous bile: but that would appear, from the context, to refer to its assumed acrimonious quality, rather than to any sensible property; and we shall presently see that practitioners of much later times dwell greatly on the supposed bilious and irritative nature of the evacuations, when it is pretty evident, that they were merely

speaking hypothetically. His descriptions indeed are not at all full: for, though he does not mention spasm as a symptom of cholera morbus, he states that Cornelius Van Royen expired in *convulsions*, within six hours from an attack of it. Still, in his description of cholera, where "the heart is overwhelmed," where "those who are seized with the disease generally die," and that within twenty-four hours at most; and in his enumeration of symptoms as marked in italics, every one, familiar with the epidemic cholera as it has prevailed in this country, will probably admit, that he has truly pourtrayed that disease, and no other.

Although Bontius has treated of "the Spasm," and of "the Cholera Morbus," under separate chapters, it is highly probable that these disorders were one, and the same.

It would seem that he has considered the tonic spasm as idiopathic, and the clonic spasm as symptomatic, yet it is evident by the expression, "there are likewise other partial spasms of the limbs," that both these forms of spasm existed in the same patient, a fact which is amply confirmed by innumerable observations in the present epidemic. If it be objected that he does not mention the usual symptoms of cholera as occurring in "the spasm," it may be answered, that neither does he mention the state of the skin, of the pulse, nor of respiration, which functions it is impossible to suppose remained unaffected in such a commotion of the system.

The edition of Bontius, which has been quoted from, is an English translation published in London, 1769; but, from the passages in the original, as inserted in parentheses, it is evident that the translation is not quite correct. The expressions, especially, of the eyes and face "*reflecting*" a red and green color can only be intelligible by supposing, that the former were suffused with blood, and the latter changed to that ghastly and cadaverous hue, so familiar to us all in the collapse stage of cholera.

[*By Dr. Paisley in* 1774.] The next notice, in point of time, which we find of cholera, is in the copy of a letter written by Dr. Paisley at Madras, dated 12th February, 1774, as given by Curtis, in his publication on the diseases of India. Dr. Paisley says, "I am favored with yours, and am very happy to hear you have caused the army to change its ground; for there can be no doubt, from the circumstances you have mentioned, that their situation contributes to the frequency and violence of the attacks of this dangerous disease, which is as you have observed, a true cholera morbus, the same they had at Trincomale. It is often epidemic among the blacks, whom it destroys quickly, as their relaxed habits cannot support the effects of sudden evacuations, nor the more powerful operation of diseased bile,

The first campaign made in this country the same disease was horribly fatal to the blacks; and fifty Europeans of the line were seized with it. I have met with many single cases since, and many of them fatal or dangerous, of different kinds arising from putrid bile being disturbed by accidental causes, or by emetics or purgatives exhibited before it had been blunted or corrected."

Dr. Paisley does not give any particular description of the disease: and though he dwells much on the putridity, and acrimony of the bile, he does not allude to the color or appearance of the evacuations. He observes that "when it (the cholera) is epidemic here, it is totally a disease of highly putrid bile, which operates on the system as poison, and brings on *sudden prostration of strength, and spasms over the whole surface of the body.*" "In relaxed habits, when the *pulse sinks suddenly*, and brings on immediate danger, the same method must be pursued but with more caution." The letter is quoted by Curtis as referring to the cholera morbus, or Mort de Chien: and these extracts will probably be deemed sufficient evidence of the correctness of the reference.

It is highly important to remark, that Dr. Paisley here speaks of the disease as being *"often Epidemic;"* that it prevailed in that form in the "first campaign," and affected both the Europeans and natives. The particular periods here alluded to are not known, but we have seen, by the extract from the records of the Medical Board, that cholera raged as an epidemic, in 1769, or 70.

[*By Sonnerat from* 1774 to 1781.] Sonnerat, whose travels in India embrace the period between 1774 and 1781, speaks of a disease on the Coromandel coast, in all respects resembling cholera, and he notices it as "an *epedimical disorder which reigns.*" His account of it is this.

"There is also another epidemical disorder, which reigns, and in twenty-four hours, or sometimes less, carries off those who are attacked. It never appears but in cold weather."

"Debauchees, and those who have indigestions, are attacked with a looseness, or rather with an involuntary flux of the excrementary matter become liquid, but without any mixture of blood. They have no remedy for this current of the bowels,* which they call a sharp flux, but leave the cure to the care of nature."

"The flux of this kind which reigned some years ago, spread itself in all parts, making great ravages: above sixty thousand

*Probably "cours de ventre," in the original. The edition here quoted is a translation by Francis Nagnus, Calcutta, printed 1733.

people, from Cherigam to Pondicherry, perished. Many causes produced it. Some were attacked for having passed the night and slept in the open air; others for having eat cold rice with curds; but the greater part for having eat after they had bathed and washed in cold water, which caused an indigestion, an universal spasm of the nervous kind, followed by violent pains and death, if the patient was not speedily relieved. This epidemical disorder happened during the Northerly winds in December, January, and February; when they ceased, the malady disappeared. The symptoms of this disorder were a watery flux, accompanied with vomiting and extreme faintness, a burning thirst, an oppression of the breast, and *suppression of urine.* Sometimes the diseased felt violent cholicky pains; often lost his speech and recollection, or became deaf, *the pulse was small and concentered,* and the only specific which Choisel, a foreign Missionary, found, was treacle and Drogue amere. The Indian Physicians could not save a single person.

"There is great reason to imagine that the perspiration being stopped and reflowing into the mass of blood, by finding its way to the stomach and bowels, occasion the vomiting, which terminated by this flux."

"That which followed, two years after, was the most dreadful. It did not proceed from the same cause as the first, as it began in July and August: it first shewed itself by a watery flux, which came in an instant, and sometimes cut the diseased off, in less than four and twenty hours. Those who were attacked had thirty evacuations in five or six hours; which reduced them to such a state of weakness that they could neither speak nor move. *They were often without pulse; the hands and ears were cold; the face lengthened; the sinking of the cavity of the socket of the eye was the sign of death;* they felt neither pains in the stomach, cholics, nor gripings. The greatest pain was *a burning thirst.* Some brought forth worms by stool; others by vomiting. This cruel pestilence affected all the Casts in general, but particularly those who eat meat, as the Parias. The Native Physicians succeeded no better in their treatment of this disorder, which was again renewed during the North-winds."

It is by no means easy to determine the precise dates of the epidemic visitations of cholera alluded to in these extracts, as prevailing, in the first instance, "*some years ago,*" and in the second, "*two years after.*" It is, however, reasonable to suppose, that a disease, which "spread itself in all parts," and carried off "above 60,000 people from Cherigam to Pondicherry," would not have been passed over without some special notice by Dr. Paisley, in his letter dated 1774 already quoted, had it occurred prior to that date. The presumption seems to be, that Mons.

Sonnerat described invasions of epidemic cholera which took place subsequently to the year 1774. That they were certainly considerably prior to that epidemic, which is stated in the records of the Medical Board to have prevailed "over the whole coast in 1783," is evident, from the date of the work; and consequently, *when viewed in reference to other authorities, it is obvious, that cholera maintained its influence, with little apparent interruption, from a very remote period, down to a date comparatively modern.* Sonnerat notices the "term mort de chien" as being used in India, but applies it to "indigestions," which "are very frequent," and from which "many have died suddenly."

[*Cholera observed at Mauritius in* 1775, *and in* 1819.] It appears from the report of a Committee of British Medical Officers at the Mauritius, which was assembled in the month of November, 1819, under the authority of the Government, in order to examine into the nature of the epidemic disease which then prevailed at that Island, that the epidemic cholera was not unknown there. The following is an extract from the report. "The Committee request to say, that they have not, either in this Island or elsewhere, met with a disease possessing the characters of that which now prevails; but that, from the reports of several individuals, some of whom belong to the medical profession, it does appear, that a disease, most strongly resembling in its symptoms, progress, and termination, that now under consideration, did for some time prevail in this colony in the year 1775."

The symptoms which are detailed by the Committee, as characterizing the epidemic of 1819, sufficiently indicate the identity of that disease, with the form of cholera; which prevailed at the same period, and still continues, on the continent of India. "The symptoms, in the two cases alluded to, perfectly corresponded with those of the numerous instances of the disease, which have since occurred. Those more particularly characteristic of the disease are sudden and excessive prostration of strength, with sinking of the pulse; extreme coldness of the surface of the body, which is covered with cold viscid perspiration, and a distressing uneasy sensation in the abdomen, the progress of which has generally carried off the patient in the space of a few hours."

Dr. Burne, the chief medical officer in the Island makes the following observation in his letter transmitting the report of the committee. "*A similar disease prevailed in this island in* 1775, *after a long dry season, &c. the symptoms, fatal and sudden effects, and duration, of the disease would seem to be exactly the same.* A hurricane put a stop to its ravages, which continued for probably two months, and caused a great mortality particularly among the blacks, and people of color."

But it is necessary to state, that a committee of French Medical Gentlemen, who were assembled under similar circumstances with the British Committee, make no mention of the epidemic visitation of 1775. Assuming, however, the circumstance to be true, it is highly worthy of remark, that while, as we have shewn in the preceding pages, the Indian continent suffered under cholera, about that period, viz. 1775, the disease had then also extended to that remote island.

[*At Gangan, in* 1781.] Cholera appears to have manifested itself pretty extensively as an epidemic in 1781; its appearance on this occasion is thus noticed in the report on cholera by Mr. Jameson, Secretary to the Calcutta Medical Board. "A Division of Bengal troops, consisting of about 5,000 men, was proceeding, under the command of Colonel Pearse of the Artillery, in the Spring of 1781, to join Sir Eyre Coote's Army on the Coast. It would appear that a disease resembling cholera had been prevalent in that part of the country, (the northern Circars,) some time before their arrival; and that they got it at Ganjam on the 22d March. It assailed them with almost inconceivable fury. Men previously in perfect health dropt down by dozens; and those even less severely affected were generally dead or past recovery within less than an hour. The spasms of the extremities and trunk were dreadful: and distressing vomiting and purging were present in all. Besides those who died above five hundred were admitted into hospital on that day. On the two following days, the disease continued unabated, and more than one half of the Army was now ill." In a note it is added, 'The occurrence of the disease on this occasion is noticed in a letter dated 27th April, 1781, from the Supreme Government to the Court of Directors; and the destruction which it caused in this detachment mentioned in terms of becoming regret.'

After adverting to its progress in the Circars, the letter thus proceeds: 'The disease to which we allude, has not been confined to the country near Ganjam. It afterwards found its way to this place (Calcutta); and after chiefly affecting the native inhabitants, so as to occasion a great mortality during the period of a fortnight, it is now generally abated, and pursuing its course to the northward.' It would have been interesting to have traced this disease, as it seemed to have put on the epidemical form, but every attempt to discover its further progress has proved fruitless.

[*Noticed by Curtis, in* 1782.] From this period, up to the year 1787, and perhaps even to 1790, the cholera would appear to have existed epidemically, in various parts of India. Curtis states, that the fleet, in which he served, joined Sir Edward Hughes's squadron at Madras, in the beginning of 1782;

OF MICHIGAN

in May of that year, his ship, the Seahorse, arrived at Trincomalee, and he says, "The mort de chien, or cramp, I was also informed by the attending Surgeon, had been very frequent and fatal among the seamen, both at the hospital and in some of the ships, particularly in the Hero and Superb." The Seahorse had no case of the disease till the 21st of June, when between that day and the 25th they had eight cases.

"In every one of the eight cases the symptoms were so much alike, both in order and degree, that a description of any one would answer almost equally well for every other. Any difference that took place was in the suddenness of the attack, or the rapidity with which the symptoms succeeded each other. In all of them the disease began with a watery purging, attended with some tenesmus, but with little or no griping. This always came on some time in the night, or early towards morning, and continued some hours, before any spasms were felt; and light affections of this kind being very common in the country, the patients seldom mentioned them till they began to be more severe, and extended to the legs or thighs. *This purging soon brought on great weakness, coldness of the extremities, and a remarkable paleness, sinking and lividity of the whole countenance.* Some at this period had some nausea, and retching to vomit, but brought up *nothing bilious.* In a short time the spasms began to affect the muscles of the thighs, abdomen, and thorax, and lastly they passed to those of the arms, hands and fingers; but I never saw, then or afterwards, those of the neck, face, or back at all affected. The rapidity with which these spasms succeeded the first attack, and their severity, especially as affecting the muscles of the thorax and abdomen, denoted in general the degree of danger in the case. The affection is not, as in *tetanus,* confined to a single muscle, or to a certain class of muscles only. Neither does it, as in the spasmus clonicus, move and agitate the members. It is a fixed cramp in the belly of the muscles, which is gathered up into a hard knot, with excruciating pain. In a minute or two this relaxes, is again renewed, or the affection passes to others, leaving the miserable sufferer hardly an interval of ease; and, lastly, it passes from one set to another; from those of the inferior extremity to those on the upper parts, leaving the former free. The patients complain much of the pain of these cramps; think they obtain some relief by friction of the parts, and cry to their companions to rub them hard. As the disease proceeded, the countenance became more and more pale, wan, and dejected; *the eyes became sunk, hollow, and surrounded with a livid circle. The pulse became more feeble, and sometimes sank so much as not to be felt at the wrist, in two or three hours after the*

spasms came on. But so long as it could be felt, it was but little altered in frequency. If the spasms happened to intermit, it would sometimes rise a little, and the countenance assume a better look. The tongue was generally white, and more or less furred towards the root: the patients had all *great thirst, or rather a strong desire for cold drinks; but there was no headach or affection of the sensorium commune throughout.*"

The coldness of the extremities, which was perceptible from the very first, continued to increase, and spread over the whole body, but with no *moisture* in the skin till the severity of the pain and spasms forced out a clammy sweat, which soon became profuse. *The hands now began to put on a striking and peculiar appearence. The nails of the fingers became livid, and bent inwards; the skin of the palms became white, bleached, and wrinkled up into folds, as if long soaked in cold water;* the effect, no doubt, of the profuse cold sweat, which is one of the most pernicious and fatal symptoms of the disease, both from the effect it has in such a climate, of exhausting the strength, and in abstracting heat from the system. In some of the present cases, and in many others after this, we had recoveries from the severest degree of spasmodic affection, even where the pulse had been for hours completely lost at the wrist, and the body perfectly cold; but never of any who had these profuse cold clammy sweats, and where the hands had put on this appearance."

"All this while the purging continued frequent, and exhibited nothing but a *thin watery matter or mucus:* In many, the stomach became at last so irritable, that nothing could be got to rest upon it; but every thing that was drank was spouted out immediately; without straining or retching. *The countenance and extremities became livid, the pulsations of the heart more quick, frequent, and feeble;* the breathing began to become laborious and panting; and, in fine, the whole powers of life fell under such a great and speedy collapse, as to be soon beyond the power of recovery. In this progression, the patient remained from three to five or six hours from the accession of the spasms; seldom longer. These began at last to abate, but with more internal oppression, great jactitation, panting and gasping for breath, from the diminished action of the respiratory organs; for there were no marks of oppression or effusion on the lungs; and the motion of the heart, so long as it could be felt, became more and more quick and irregular, till death came at last to the relief of the miserable sufferer." Sometime before that event took place, *the spasms gradually abating, left the sufferers entirely, and so much possession of their faculties did they retain, that they would continue to talk sensibly to their messmates, to the last moment of their life, even*

when the whole body had become perfectly cold, and all pulsation of the heart had ceased for a long time to be distinguishable."

"About the middle of July, 1782, I entered on duty at Madras Hospital. Here, again, I had occasion to see many more cases of the mort de chien. It was frequent in the fleet in the month of August, and beginning of September, the season at which the land wind prevails on this part of the coast. We had some cases in the hospital in the end of October, and in November after the monsoon, but few in comparison."

[*Also by Girdleston.*] Although cholera would thus appear to have been of limited prevalence in the Naval Hospital at Madras, in October, 1782, its influence was most severely felt at that period by the newly-arrived troops from England, as stated by Girdleston in his Essay on Spasmodic affections of India. He observes, spasms were the first disease which appeared amongst the troops who arrived at Madras in October, 1782, under the command of Major General Sir John Burgoyne. More than fifty of these fresh men were killed by them within the first three days after they were landed in that country, and in less than a month from that time, upwards of a thousand had suffered from attacks of this complaint."

"The symptoms which commonly first presented themselves were coldness of the surface of the body, especially of the hands, feebleness of the pulse, and spasmodic contractions of the lower extremities, soon extending to the muscles of the abdomen, diaphragm, and ribs. As the spasms advanced, the muscles might be seen to assume the rigidity of cartilages; sometimes causing the body to remain immoveably extended, sometimes bending the trunk through its whole length, anteriorly; and sometimes though seldomer, backwards. The parts in which the spasms began, generally remained rigid; but those which were subsequently seized with them, had momentary intermissions of the contractions; the only intervals of relief experienced by the patient from the most tormenting pains. *The hands and feet then generally became sodden, with cold sweat, the nails livid, the pulse more feeble and frequent, and the breath so condensed as to be both seen and felt, issuing in a cold stream at a considerable distance. The thirst was insatiable, the tongue whitish, but never dry;* vomitings became almost incessant; the spasms, cold sweats, and thirst, increased with the vomitings; which last, if not checked, soon terminated the existence of the patient." "In this manner, most commonly was the succession of phenomena; but often they were so rapid in their attack, that they seemed to seize the patient all in conjunction instantaneously."

"In some few, the extremities remained warm; in others also the spasms were only clonic or convulsive. Some died in the

first hour of the attack; others lived a day or two with remissions; when they died, either of universal spasms or an apoplexy. *On dissection of the bodies after death, it appeared that no injury had been sustained by the brain, liver, gall-bladder, stomach or heart.* The prognosis of this disease is formed with greater certainty from the warmth or coldness of the extremities, than from either the universality of the spasms, or the frequency or steadiness of the pulse. Thus if the spasms were ever so general, with warmth of the extremities, there was no immediate danger: on the contrary, if the spasms were ever so trifling, with coldness, there was every danger to be feared."

Girdleston, like Bontius, treats of the "Spasms" as an idiophatic disease; yet it is obvious from his observations on the prognosis, that spasm was merely a symptom, and one of secondary importance. He has not noticed purging, and from the casual way in which vomiting is mentioned, it seems doubtful whether we are to consider purging to have been inadvertantly omitted, or that it was really not present, as has often been observed to be the case on late occasions. It is accordingly assumed that the "spasm," described by Girdleston, was in fact the spasmodic cholera, or mort de chien of Curtis.

It is also noticed in the Bengal Report, that in the month of April, 1783, cholera destroyed above 20,000 people, assembled on occasion of a festival at Hurdwar; but it is said not to have extended to the neighboring country. All these authorities would seem accordingly to establish the fact of the prevalence of cholera in India; and especially of its existence during the period extending from 1769–70 to 1787, when we find the first notice of the disease in the records of this Office as given in the extracts, and which we now come to consider.

[*Dr. Duffin's Account of it, at Vellore, in* 1787.] Dr. Duffin, in a letter dated the 28th October, 1787, says, "I returned yesterday from Arcot, where I had an opportunity of seeing the situation of the sick. The cholera morbus rages with great violence, with every symptom of putrescency, and so rapid in its progress, that many of the men are carried off in twelve hours' illness." Dr. Duffin considered the disease to depend on putrid bile; he recommended castor oil, external heat, frictions, and the internal exhibitions of warm cordial drinks, as the plan of treatment he had always found successful. In a subsequent letter, dated the 3d November, he enters more fully on the nature of the disease. "The symptoms were generally pretty much the same in all I have seen, only the violence of the spasms was greater according to the stamina of the patient, and the quantity of putrid matter in the primæ viæ. They generally are seized with a nausea, frequent heats, and chills, a dryness of the skin,

and numbness and uncommon sensation, as they express it, in different parts of the body. Then came on cold sweats, severe gripings, and mostly a purging of bilious colluvies, appearing often in a ferment like yeast, and not unlike it in color, with a putrid offensive smell, retchings to vomit, often bilious, and at other times scarce any thing is brought up, but the liquor that is drank; an intense thirst, oppression on the præcordia, with difficulty of breathing, frequently the spasms begin with the first attack, though sometimes they only appear as the disease advances, and then generally affect the lower extremities, afterwards the abdominal muscles; and the whole system becomes convulsed. The pulse from the first sinks, and at times is scarce to be to felt; profuse clammy cold sweats, and pallid hue overspread the body; the countenance ghastly, the eyes sunk, and the voice scarcely to be heard, with great dejection. The tongue in general moist, till near the close of the disease, when it becomes dry and foul, and the breath offensive; the urine generally pale and in small quantity."

It is to be observed, that Dr. Duffin, at the period in question, was stationed at Vellore, about 14 miles from Arcot; and that his description of the cholera could not be founded on any lengthened observation of the cases at the latter station, since he only made a very short visit to it. There seems some reason to doubt, therefore, whether he was not describing partly what he saw at Arcot, and partly what he had more experience of at Vellore, where the cholera was then also raging, but not in a very dangerous degree. His confident allusion to the bilious nature of the contents of the primæ viæ, and the success of castor oil in curing the disease, may lead us to suppose that at Vellore, he had in fact to contend chiefly with the cholera morbus as it is commonly termed, not with the epidemic or spasmodic cholera. This conclusion is supported by a reference to the sick returns, which happen in this instance to be somewhat less meagre and imperfect than they generally are found to be at that distant period.

It appears that, during the month of October, 1787, twenty-two Europeans were admitted into hospital with "cholera morbus" at Vellore, and two Natives; of whom it cannot be ascertained that any died, for the returns of that period do not show the disease from which the casualties arose; however, only two Europeans died during that month at Vellore from any disease, and not one Native. At Arcot, on the contrary, 35 Europeans are entered in the sick returns, under the head of "cholera morbus," in October, 1787, but no natives; and 25 Europeans died that month, a number which falls short of what Dr. Davis distinctly attributes to cholera alone. In November, 45 Europeans

are returned at Vellore, under the head of "cholera morbus," and 1 Native; only one European died that month at Vellore.—At Arcot, 17 Europeans are returned in November as ill with "cholera morbus;" only one death took place in all, but during this month it seems to have slightly affected the Natives, 12 being returned, of whom none died; there were at this time four Regiments of Native Cavalry quartered there. It seems reasonable, therefore, to infer, that the disease prevalent at Arcot, and described by Mr. Davis as "a spasmodic affection of the nervous system," was not the same, in general, with that which existed at Vellore, unless we impute a degree of efficacy to castor oil which can hardly be admitted.

[*Dr. Davis's account of it at Arcot in* 1787.] Mr. Davis, a member of the then Hospital Board, appears to have been deputed from Madras, to investigate the nature of the sickness which prevailed at Arcot. In his report to the Board, which is dated the 29th November, 1787, he states as follows. "I found in what was called the epidemic hospital, three different diseases, viz: patients laboring under the cholera morbus, an inflammatory fever, with universal cramps; and a spasmodic affection of the nervous system distinct from the cholera morbus. I understood from the regimental surgeon, *that the last disease had proved fatal to all who had been attacked with it;* and that he had lost seven and twenty men of the regiment in a few days. Five patients were then shown me, with scarce any circulation whatever to be discovered; their eyes much sunk within their orbits; their jaws apparently set, their bodies universally cold, except at the præcordia, and their extremities livid. Mr. Pringle observed that these five men were attacked on the 26th October, that Mr. Duffin had seen them, and had recommended castor oil to be administered, &c. &c."

He then goes on to say, "finding on the day of their attack, the rectum had discharged its contents in the action of straining to vomit without being able to bring any thing up, I directed a stimulant injection to each of these patients, which produced a copious discharge of fæces, without any bilious induration (indication?) whatever." Having prescribed some antispasmodic medicines, he says, "from all which, I had the pleasure to observe, that in four and twenty hours after my first visit, the spasms had totally subsided, the patient's voice, which all along had been so low as scarce to be heard was returned almost to its natural state; the pulse that was imperceptible, full and even." After ordering some carminative purgatives he observes, "I attended to the operation of these respective medicines and could discover no bilious indication in the whole system."

Two of the five patients having died in a few minutes after being taken out of a hot medicated bath, "upon dissection the duodenum was found distended with putrid air; the other intestines empty except the colon, and rectum, in which latter there were indurated fæces; the whole viscera sound, the gall-bladder turgid, but not diseased."

Mr. Davis does not state the symptoms of the "inflammatory fever with violent cramps," farther than that the patient complained of a "tightness of the abdomen with a costive habit." The "cholera morbus" was distinguished by spasms of the præcordia, and cramps of the extremities with bilious lientery, and a copious discharge from the stomach of a green, yellow and dark, colored bile." During his residence at Arcot, upwards of sixty patients laboring under these three forms of disease were admitted, and only two or three deaths ensued. The dissection of a case is given, where, it is stated, "*the bladder was most singularly contracted, and did not exceed in size a large nutmeg*, yet without inflammation, or any apparent disease, except its contracted state."

[*Mr. Thompson's account of it, at Arcot and Trincomallee.*] Mr. Thompson, Surgeon, who was also sent to Arcot at the same time with Mr. Davis, observes, "This disease is exactly the same as prevailed at Trincomallee in the months of April and May 1782, when the season was very hot, and chill, the winds blowing from the land, and reaching some leagues to sea. The weather here at present is the same as I experienced at Trincomallee." Mr. Thompson also gives an account of a dissection where "the gall-bladder was exceedingly distended with bile, so much so as to appear protruded some inches below the liver, and to contain near six ounces of bile. No marks of putresence in any of the abdominal viscera. *The urinary bladder quite empty and contracted to the size of a walnut;* the stomach and duodenum both empty of bile, and no appearance of inflammation in any part of the intestinal canal or peritoneum."

To persons familiar with the progress of cholera during late years, there can be little difficulty in understanding and reconciling the apparent discordances in the accounts just quoted. Many instances of the common cholera would seem to have occurred at Arcot, as well as at Vellore, where, it has been conjectured, this form of the disease chiefly prevailed. Some cases seem to have commenced with a degree of febrile excitement, an occurrence which has been occasionally observed in the present epidemic; or perhaps, these cases might be properly referred to a species of febrile affection with cramps, of which we have a very distinct history by Mr. Anderson, who observed the disease at Ellore in 1794, and styled it a "Causus;" lastly, that which Mr.

Davis characterizes as a "spasmodic affection of the nervous system distinct from cholera morbus," was no doubt the same low and dangerous form of the disease with which we have become too well acquainted in recent times.

The disease would seem to have lost its force at the period when Mr. Davis arrived at Arcot; for we find that the five cases, of the low form, which he first saw, had lingered from the 26th to the 29th; and few of the subsequent seizures proved fatal, which is quite analogous with our present experience.—Whether the bowels were less generally affected in that epidemic, or whether the means employed, and the prolongation of life for three days had given rise, in the cases in question, to fæcal formations, and to their accumulation in the large intestines, it is not easy, from the scantiness of our information, to decide. But, if any doubt could be entertained of the cases described being cholera, such as we have lately witnessed, the testimony of Mr. Thompson to their identity is conclusive, if we admit that the Mort de Chien of Curtis, which he states to have prevailed at Trincomallee at the time mentioned by Mr. Thompson, was really cholera.

[*Cholera noticed in* 1790 *in the Northern Circars.*] It is stated in the Calcutta report, that "Cholera was again very prevalent and destructive in a Detachment of Bengal troops marching through the Northern Circars, in the months of March, April, May and June of 1790. "The disorder was characterized by precisely the same symptoms which marked the late epidemic. It began with violent pain and spasm in the stomach and bowels; which were followed by purging, vomiting, and all the signs of extreme debility."

[*Noticed by Dr. James Johnson.*] The next account we have of cholera is to be found in Dr. Johnson's work on the diseases of Tropical Climates. It does not appear in that work, that cholera was then epidemical, but it would seem to have occurred pretty frequently, both on shore, and on ship board, chiefly in the vicinity of Trincomalle. The precise date is not mentioned; it is concluded, however, to have been about 1804. Dr. Johnson does not detail the symptoms with much minuteness, contenting himself with those occurring in one or two cases, and referring generally to Curtis's description of the disease, a pretty satisfactory proof that they were the same. A seaman on waking after a debauch, repaired to the deck, and there again he fell asleep, during the chilly part of the night. "About four o'clock in the morning, he awoke with a shiver and left the deck, but was soon seized with frequent purging and griping, his stools consisting of mucus and slime. Nausea and retching succeeded; nothing being ejected but phlegm, and the contents of the stomach. His pulse was now small, quick, and contracted; his

skin dry, but not hot. About eight o'clock in the morning he began to feel spasms in different parts of his body, which soon attacked the abdominal muscles, and threw him into great pain. During these paroxysms, a cold clammy sweat would be occasionally forced out, especially in the face and breast. The extremities now became cold; his features shrunk; the stomach rejecting every thing, which was offered, either as medicine or drink. The abdomen and epigastrium all this time were distended and tense, with incessant watery purging and painful tenesmus. By ten o'clock his pulse could scarcely be felt: his breathing was oppressed and laborious, his eyes sunk, and the whole countenance singularly expressive of internal agony and distress. The extremities were cold, shrivelled, and covered with clammy sweats. The violence of the spasms now began to relax: and by eleven o'clock, or seven hours from the attack, death released him from his sufferings." "This may serve as a specimen of the worst form of that dreadful disease, which has obtained the appellation of "mort de chien," or the "death of a dog."

[*Cholera supposed to have been met with at various times since* 1787.] Since cholera has become familiar to the older practitioners here, many, perhaps all of them, recollect having met with insulated cases of that disease, as well as of sudden, and often fatal illness, which they, at the moment, could not well understand, and which consequently, proved extremely embarrassing. Such cases would no doubt be attributed by different practitioners to different causes, and be referred to different heads of disease according to the various states in which the patients were seen; and, perhaps some of them were considered to be merely anomalous instances of common cholera; but late experience has now very generally led to the opinion, *that they were in fact cases of spasmodic cholera.* The records of the Medical Board throw no light on this subject. The number of cases of the description alluded to, which may have entered the military hospitals, could not however, in all probability, have been great, without attracting observation. It might perhaps be thought that the necessity of classing the cases in the official returns would have led to their being detected by a bare inspection of these documents; but in the absence of any nosological arrangement, which then distinguished the returns, no difficulty would be experienced in disposing of them.

Sporadic cases of spasmodic cholera might naturally produce the impression that some poisonous matter had been swallowed, which other circumstances would contribute to render sufficiently plausible; for, it is notorious, that intoxicating liquors are

prepared by the natives, and clandestinely sold to the European soldiery, which contain the most deleterious matters, and which often produce fatal consequences to those who drink them.—The symptoms attending such cases are frequently very anomalous and perplexing. Although the natives are less prone to debauch in spirituous liquors, they are yet not altogether to be exempted from the reproach; and the notion of a poison having been swallowed, would in their case be rendered still more probable, from such occurrences being not unknown amongst them, and from our ignorance of the nature of the poisons which are used.

It must be admitted, however, that very few cases either of sudden death, or poisoning, or cholera, are to be found in the returns; but it will presently be shewn that no positive conclusion can thence be drawn against the existence of spasmodic cholera prior to the year 1818, when it appeared epidemically in these territories; and that some at least of the cases designated as cholera in former times, were clearly of the spasmodic species.

[*Described by Mr. J. Wyllie in* 1814.] Mr. John Wyllie, in his report dated 20th July, 1818, makes the following remarks. "Before concluding, I think it proper to add, that although I have never, before the late occasion, seen this peculiar disease prevailing as an epidemic, yet I have at various times met with singular cases of it in the most aggravated form, and I am much mistaken, if I have not recorded two particular instances of it in my Journal of the 1st Battalion 24th Regiment for the month of June 1814, under the names of Paramuttee, and Madaramooto, Sepoys." On referring to these cases, which have been preserved, Mr. Wyllie's conjecture seems to be fully confirmed: The first case is thus described. "Jaulnah, 19th June, 1814, P. M. ½ past 2. He is in a state of the most extreme exhaustion, unable to move or speak, features contracted; eyes sunk, half open, and of a dull lustre; countenance bedewed with a cold sweat; pulse low, skin cold. Has been vomiting and purging very frequently since 7, A. M. and had all yesterday been affected by a watery diarrhœa;" at 3, P. M. he "is greatly distressed by excruciating crampy pains of the thighs and legs;" at 9, P. M. "complains of thirst, tongue moist;" on the 20th he "continues very low; countenance still of a ghastly appearance," "alvine discharge copious, alone of ash-colored slime." The patient recovered. The next case is on the 24th June, 7, A. M. "Is in great distress from violent crampy pains of the muscles of the upper and lower extremities, but more particularly of the fingers; there is great prostration of strength; countenance ghastly; surface cold; pulse gone, much thirst. He had a very copious

watery purging on him since 1 o'clock this morning. He attributes his complaints to having slept last night on the damp ground, and in the open air while on guard; at 9, A. M. "pulse just perceptible;" at 2, P. M. "slight giddiness, eyes red, says he has much appetite;" at 6, P. M. "one copious pale watery evacuation." This man also recovered, and both were treated with opium, and diffusible stimuli.

[*Also by Mr. Cruickshanks in* 1814.] Another incidental notice of cholera, has led to the discovery of that disease having prevailed to a remarkable extent, at the same time, and much in the same neighborhood, as in the preceding instance. The late Mr. J. J. Duncan, in a report dated 1st September, 1819, after making some observations on the comparative advantages of dry and moist heat, externally applied, goes on to say, "In the month of June 1814, when the cholera appeared with great severity in the 1st Bat. 9th Regt. N. I. on its march from Jaulnah to Trichinopóly, I employed exactly the same plan of exciting heat, (heated sand,) and found the greatest benefit resulting from it." "The disease in the 9th Regiment in 1814 resembled in every particular, (with the exception of the heat at the præcordia,) the cholera at present so common, although it could not be called epidemic. The best behaved, the most robust, and the most active, were attacked and suffered equally as much as any patient I have seen with the epidemic cholera; out of a very considerable number of patients I only lost one man; the number I could not specify as I was ordered back to Jaulnah on duty about ten days after the appearance of the disease, and before the monthly returns were despatched."

On referring to the returns of that corps it appeared, that in the month of June 1814, ninety-nine cases of "bowel-complaint" were entered, of which fourteen proved fatal; and about sixty cases of the same disease were admitted in the succeeding two months, of which however very few died. As these returns made no allusion to cholera, and as they were signed by Mr. Cruickshanks, a reference was made to him for information, respecting the preceding observations of Mr. Duncan, which has drawn forth a very valuable report, bearing date the 17th June, 1823. It now appears, that a brigade of two Battalions of N. I. marched from Jaulnah on the 29th May, 1814, and that about the 10th or 11th of June a disease broke out in one of the Corps, which there can be no doubt was the spasmodic cholera.—"*When taken into hospital,*" Mr. Cruickshanks observes of the first cases he saw, "*they exhibited all those symptoms now so well known, of persons laboring under the advanced and fatal stage of epidemic cholera; the skin cold, and covered with cold perspirations; the extremities shrivelled, cold, and damp; the eyes sunk,*

fixed, and glasey, and the pulse not to be felt. These persons all died, and I find, on referring to such notes as I have preserved, that influenced by consideration of the vascular collapse, and total absence of arterial pulsation, I have denominated the disease asphyxia. Many Sepoys were brought into hospital in circumstances approaching to those above detailed. Of them, in a considerable proportion, the disease terminated fatally. *Thus the cases which I first saw of this malady, in the aged among the camp followers, differed in no respect from the worst cases of that affection since so well known under the name of spasmodic cholera.* That name however I did not adopt, neither in my public reports, nor in the private notes which I took at the time. In this I was chiefly influenced from considering the nature of the matter ejected by vomiting and by stool, which in cholera is said to consist of bile, but *which in these cases was aqueous or mucilaginous.* Besides it was evident that the diluent treatment, recommended in cholera, could never be applicable to such a disease as that with which I had to contend. I continued, therefore, to employ in my reports the term "bowel-complaint," both because I found it in the hospital books on joining the corps, and because, if it conveyed no very precise idea of the malady which it was meant to designate, it was at least an appellation whence no erroneous impressions could be derived."

This paper of Mr. Cruickshanks is of great importance, *in as much as it evinces that cholera did exist to an extent not hitherto suspected to have occurred at so recent a date; and also, that even under these circumstances, no trace of it is found in the public records, for unless we had been guided by the incidental remark of Mr. Duncan, made five years after the occurrence, and had most fortunately been able to refer to Mr. Cruickshanks, the medical returns of the corps never could have led to a knowledge of it.*— Hence, as already observed, though cholera very rarely appears in the sick returns of former times, *it is by no means to be thence inferred that it did not then exist.*

But this paper is also peculiarly valuable, as shewing that the cholera assumed, on that occasion, one of those singular and unaccountable features which it has frequently manifested in the present times; for, after enumerating various striking atmospherical vicissitudes, changes of food, and many other predisposing, remote, and exciting causes of disease, to which the Brigade had been exposed, Mr. Cruickshanks goes on to observe, "To none of these causes of disease which I have enumerated, did the natives themselves attribute the sickness and mortality which prevailed; and on considering that of two Battalions composing the Brigade, alike exposed to all those causes, *one only* suffered from the epidemic, *the hospital of the fifth N. I. exhibiting not*

a single case of analagous disease, those adduced can only be regarded in the light of remote, or predisposing causes; while, something or other acting exclusively on one Battalion must be sought for as instrumental in exciting the malady." We shall have occasion hereafter to revert to this particular subject; at present it is mentioned as shewing that cholera did, even then, manifest one of the most curious of its features, namely, that of two bodies of men, apparently under similar circumstances, one shall be attacked by it, and the other shall escape.

[*Mr. Hay considers it to be endemic in Travancore.*] It would also seem, by the subjoined extracts of reports from Mr. Staff Surgeon Hay, that cholera, in a form nowise different from the spasmodic or epidemic, is endemial in the Travancore country, and that he regarded the disease which appeared there in October, 1818, to be this endemic, rather than the epidemic, whose approach from the northward he still contemplated. On the 19th November, 1818, Mr. Hay writes: "the spasmodic cholera, I am happy to say, abates; the last seven days not having afforded more than thirty-six cases at Quilon, and there has been no casualty here in that time; but the Vythians, who arrive from the country for instruction and medicines, report the deaths of almost all attacked." After acknowledging the receipt of some medical supplies he continues, "I trust to be able to make a noble stand against the *epidemic* when it arrives; what I have had to encounter recently I hold to be the *endemic* Veshoo-ugeka, or Neer-comben, if not of the Malabars, certainly of the Travancorians, which is perfectly familiar to all here; committing frequently great mischief, and sometimes (25 years since) desolating the country. Then, thousands are said to have died of it; the Vythians fled from it as a plague, and no one, who has not early succour from suitable medicines, is ever known to recover;" "the description of the Veshoo-ugeka tallies in every particular with that of the spasmodic cholera; and whether the epidemic reaches us or not, the country will have reason to be thankful for instruction and remedies they never might have had, unless the dangerous inroad of the epidemic had been apprehended. In May last at Trevanderan, the capital, one hundred lives were sacrificed to this Veshoo-ugeka (poisonous air); some of the servants of the palace were seen by Mr. Provan's Assistants, and saved, but the villages around, having no assistance, died to a man." Again, on the 24th December, 1818, Mr. Hay writes: "The Neer-comben, which signifies gush of water by stool, the effect of the disease, and its synonyme Veshoo-ugeka, or poisonous air, its imguted cause, which are the vulgar and scientific designations of our present spasmodic

cholera, has been very prevalent amongst the troops, their families, and followers. In Quilon I have treated upwards of 120 under the spasmodic cholera, and of the inhabitants a considerably greater number, with complete success in every case, where application was made within six hours; and hundreds have been saved by the use of the remedies I have distributed throughout the country. This shews unusually, for be it remembered that to the central parts of the Travancore coast, and parts *quite* adjacent, so far as my reports inform me, the *endemic* has been principally confined, and it is of this I speak; but the *epidemic* also now rapidly progresses southward, having already at Cochin yielded Mr. Mather some hundreds of patients, and at Aleppy about 30 per diem are taken ill; as it nears us, I become more apprehensive that its mortality will be great, for although medicines, with ample instructions, have been distributed to 143 Vythians and others in the country, yet from the experience I daily have of their general inattention, I much fear that when the day of visitation and trial arrives, the sick will be found too often left to their fate, altogether unassisted." Mr. Hay goes on to state, that in some villages where there was no medical aid, from three or four to ten people were dying daily of the *endemic;* and, talking of the zeal of the Vythians, he observes, "but when the same malady (spasmodic cholera) was *epidemic* here 34 years since, they ran from their charge, under the persuasion that the disease was contagious, for many died, and numbers in one family."

There can be no doubt, however, that the disease described here as an endemic was, in fact, the epidemic cholera of other parts; and no particular manifestation of it took place afterwards at Quilon in regular course from Cochin and Allepy, as seemed to have been expected by the Staff Surgeon, nor indeed, until July and August following. The progress of cholera as an epidemic along the western coast, however, was much less regular than in other tracts, which may perhaps be attributed partly to the geographical peculiarities of that coast, and partly to the disease being in some degree endemic, which would not only accelerate the invasion and march of an epidemic of the same nature, but also render it difficult to fix the precise dates of its appearance.

[*Epidemic Attack of cholera in Travancore, about* 1790, *and in the Ceded Districts about the same time.*] Mr. Hay mentions in his first letter, that Cholera committed great ravages in the Travancore country "25 years since" and in the 2d letter that "it was epidemic 34 years since," either of these dates, supposing that there was only one visitation meant, would prove the existence of cholera, epidemically, at a period considerably ulterior

to 1787, and of course anterior to the instance in the 1st Battalion, 9th Regiment; and the whole communication shews that the disease is at no time of rare occurrence in that country. There is a very fatal form of disease also known in Travancore, called "the red eye sickness" by the natives, which is evidently a modification of cholera. Mr. Superintending Surgeon Duncan (page 110) also observes, "I find the old inhabitants of Bellary acquainted with this disease, and inform me that it raged here about thirty years ago with great violence. This was succeeded by a famine, for want of inhabitants to cultivate the country."

Having, in the preceding desultory remarks, attempted to trace the existence of cholera in India from a very remote period, down to that of its epidemic appearance in 1817, sometimes coming as a pestilence upon the land, at others visiting only particular tracts; and having also attempted to shew grounds for inferring, that we are not acquainted with all the instances of its epidemic visitations, nor by any means aware of the extent of its occasional or sporadic appearances, it only remains to refer the reader to the valuable reports of the Bengal and Bombay Boards, for information respecting its late march through the respective territories of those presidencies; to Mr. Orton's separate work, for many interesting particulars of its appearance here; and to the narrative at the first page of this report, for an account of its progress through the Madras territories. This narrative has been compiled from official reports; and, as it is intended to exhibit the history of the disease, as a sort of memoir to the map which is prefixed, it has been as much as possible divested of all medical reasoning. It is not intended to enter into any discussion respecting the forms of cholera, or the diseases supposed to have been cholera, which may be thought to be described by European writers of ancient and modern times, as having prevailed in Europe.

[*Nosological Remarks.*] Cholera has generally been classed by Nosologists under the head of Fluxes; but Cullen, though retaining the name, which he understands to signify "a flux of bile," and defining the disease to be so, or of a "bilious humor," places it in his class, Neuroses, and constitutes it a genus of the order, Spasmi. Dr. Good, in his late valuable work, the Study of Medicine, retains the generic term Cholera, which he justifies on the ground that the "bile is morbidly affected in its secretion, either in quantity or quality;" and he places it in the class Cœliaca, or diseases of the digestive function, and in the order Enterica, or diseases affecting the alimentary canal.

[*Names given to Cholera by the Hindoos.*] The quotations which have been given from Hindoo writings, shew, that cholera,

or at least, two diseases resembling it, are also there classed, either under the head of nervous diseases, or of disorders of the digestive organs. The native practitioners know the disease by the name of Vishuchi, or Vishuchiki; but the people in general designate it only by two words, signifying in their respective languages, *vomiting and purging*. The term "Neer comben," mentioned by Mr. Hay, as being in use with the natives of Travancore to express the disease, does not appear to be known to the natives of the Coromandel coast. [*Mordixim.*] The word Mordixim, mentioned by several modern authorities, is incidentally introduced by Bontius in his description of the Hog stone, who says, that "it (the Hog stone) is infused in wine for the *Cholera* with the Islanders, (Malays, call Mordexi." Sonnerat has been accused of translating, or transforming this word into Mort de Chien; but indepently of there being no such phrase in the French language, it is manifest, from the quotations already given, that Mort de Chien was in current use among our soldiers and sailors at the time Sonnerat wrote his book; he does not apply it indeed to cholera, but to an indigestion or cholic, in which sense it is in current use with the Portuguesé at this day.

[*Generic Name.*] The generic term, cholera, being consecrated by universal, and almost immemorial use, it would not, perhaps, be proper to reject it, even could we propose another, demonstrably better; or prove satisfactorily, that bile, either in its quantity or quality, has no connexion whatever with the cause of the disease; but the specific terms may admit of some observations. We have had no other method in this country of distinguishing between the two forms of the disease, than by retaining the old, and, according to Dr. Good, the pleonastic appellation of *Cholera Morbus*, signifying that form wherein bile appears early, or from the first in the discharges from the alimentary canal, and in which the circulation is not remarkably depressed; and by applying the adjuncts *spasmodica* or *epidemica* to the second, or that form wherein bile, in common with the other glandular secretions, disappears, and where the pulse sinks, or ceases to be felt.

[*Specific names.*] The specific term, spasmodic, applied to the Indian cholera, has met with very serious opposition; for, if restricted to the affection of the muscles of voluntary motion, it applies a symptom of very minor importance, which in a great proportion of cases indeed, does not at all occur; and of which the existence in other parts of the system, cannot by any means be held as incontestibly proved. The term "cholera epidemica" is that which has been chiefly used of late; especially in official papers, and hitherto it has been sufficiently understood; but it is obviously adapted for temporary application only. It may there-

fore be allowed to substitute a term which, it will be attempted to shew, imports an unfailing diagnostic of this species of cholera; namely, the *sinking* or *arrest* of the circulation; and, accordingly, to call it cholera asphyxia, using the word asphyxia only in its restricted sense, that is the stoppage, or suppression of the *pulse*.

This proposed specific term, asphyxia, will, it is presumed, designate the disease unerringly; for, as far as our knowledge of it either from history or observation hitherto extends, there appears to be in all cases an evident tendency to a sinking of the circulation, an apparent arrest of it in the vessels of the extremities, if we may judge from the absence of pulse, and from the effect of venesection, in every instance where the complaint is not early cut short by art; and, especially, an arrest of it in every vessel accessible to the senses, in all fatal cases, at a period before death, comparatively more remote than is known in any other disease.

ART. XVIII. *An Epitome of the more important circumstances connected with the Epidemic Cholera.* By HORATIO G. JAMESON, M. D.

Amid the general anxiety to become acquainted with the nature, prevention, and cure of cholera, we have been inundated, so to speak, with contradictory statements, and a great deal of discrepancy of opinion on many points connected with this very interesting subject. But notwithstanding the great extent of publications, and of the confused and unsatisfactory views which have existence in the public mind, a little serious reflection will convince us; that we have had time enough to become acquainted with what is really important to be known, and to perceive that a few points, well understood, will serve to explain all that we are likely to know, and to direct us in the use of such precautionary measures, both private and public, as will disarm this disease of its virulence, and quiet the apprehensions of the timid, by showing them that the disease, instead of possessing a highly fatal character, is in a vast majority of cases, a very mild and manageable disease.

Such being our views of this subject, we have thought proper to offer to our readers, an epitome of what is known of cholera. In doing this, we shall very briefly treat of its history, character, nature, prevention, symptoms, and treatment.

Of the history of the Epidemic Cholera. There is the most satisfactory evidence, that the epidemic cholera which is now prevailing on this continent, is no new disease. The most remarkable epidemic of this kind which has prevailed, was early in the 14th century, a time when medical science was at a low ebb. There are accounts of the most frightful aspect, relating to this disease, in different parts of Europe; some of the towns in the north of Europe, if we may believe the chronicles of the times, must have been nearly depopulated. We have the most frightful accounts of its existence at Lubec, in the Danish dominions; and notwithstanding that that town is not materially altered, in any thing relating to its localities, its buildings, or its inhabitants, the cholera of 1831 raged at Hamburg, and did not reach Lubec, but 36 miles distant. But, of this appalling epidemic of the 14th century, we have no satisfactory medical accounts—it seems to have been known by the name of the *black death*. We have not met with any thing worthy of notice respecting that disease, except so far as it seems to show that a dreadful epidemic prevailed far more extensively, and fatally, than any thing yet known of the present disease; and we wish to express as our opinion, that the cholera now prevailing, is not a new disease: this opinion will, we think, be sufficiently proved by the following brief sketch of its history.

While we express as our opinion that the present epidemic is no new disease, we are well aware that to us, and to the inhabitants of Europe, excepting the few who have seen the disease in the East Indies, it is as new as though it had never existed; and hence it is, that, the public in all the countries of Europe, like those of our own, have been overtaken by surprise in encountering this disease; the more so from its possessing such a vast dominion—and in this respect it is new, and uncommon. Indeed, the disease has most generally assumed the appearance of an *endemic* character, rather than the *epidemic;* but, its epidemic character is now well established.

We are indebted to the Madras Medical Board for the following particulars—"A disease having, in October last, prevailed at Arcot similar to an endemic that raged amongst the natives about Paliconda, in the Ambrose Valley, in 1769–1770, in an army of observation January, 1783, and in the Bengal detachment at Gangam in 1781, and several other places at different times, as well as under the appearance of *dysentery*, cholera morbus, or mordixim, but attended with spasms of the precordia, and sudden prostration of strength as characteristic marks."

We are next reminded of the account of Bontius a Dutch physician who wrote of the disease at Batavia in 1629—He says the cholera morbus "is extremely frequent"—the patients often

die of it "so quickly, as in the space of twenty-four hours at most."—"This disease is attended with a weak pulse, difficult respiration, and coldness of the extreme parts; to which are joined, great internal heat, and insatiable thirst, perpetual watching, and restless and incessant tossing of the body. If together with these symptoms, a cold fetid sweat should break forth, it is a certain sign that death is at hand."

Dr. Paisley notices cholera in 1774, at Madras. He says it is often "epidemic among the blacks, whom it destroys quickly." When the disease is epidemic, it "brings on sudden prostration of strength, and spasms over the whole surface of the body."

Dr. Sonnerat notices this disease as it appeared from 1774 to 1781. "There is also another disorder, which reigns, and in 24 hours, or sometimes less, carries off those who are attacked." Debauchees, and those who have indigestions, or are attacked with *a looseness, or rather with an involuntary flux of the excrementary matter become liquid.*" This "flux," some years ago, destroyed above sixty thousand people from Cherigam to Pondicherry. "The symptoms of this disorder were a watery flux, accompanied with vomiting and extreme faintness, a burning thirst, great oppression of the breast, and *suppression of urine.* —Two years afterwards there was another epidemic in which "those attacked had thirty evacuations in five or six hours; which reduced them so weak that they could neither move nor speak. They were often without pulse; the hands and ears were cold; the face lengthened; the sinking of the sockets of the eyes was the sign of death.

Cholera observed at Mauritius in 1775 and 1819. Dr. Burne —the mortality "was particularly among the blacks and people of color."

At Gangam in 1781, cholera was extensively seen as an epidemic. "It assailed them with almost inconceivable fury. Men previously healthy dropped down by dozens; and those less severely affected were generally dead or past recovery in an hour. The spasms of the extremities and trunk were dreadful; and distressing vomiting and purging was present in all. Besides those who died, upwards of five hundred were admitted into the hospital daily."

This disease has been noticed by Curtis in 1782. From this up to 1790, the disease is said to have prevailed very frequently, in different parts of the East Indies. It would be useless to repeat the symptoms, they were generally such as we have already noticed.

It is stated in the "Bengal Report," that in April, 1783, cholera destroyed above 20,000 people who had assembled at a festival. The Madras board of health observe, that those au-

thorities would seem accordingly to establish the fact of its existence, during the period extending from 1769–'70 to 1787, when we find the first records of this office as given in the extracts, and which we now come to consider.

Dr. Duffin treats of cholera in 1787. "The cholera rages at Arcot with great violence"—many of the men are carried off in 12 hours illness." The symptoms are such as we have already enumerated, and need not be repeated here; this epidemic, under the notice of doctor Duffin, seems to have partaken a good deal of the spasmodic character. This epidemic at Arcot has been noticed by Mr. Thompson also, who says, among other things, that "*the bladder was contracted to the size of a walnut.*"

Cholera has also been noticed in the Northern Circars—"the disorder was characterized by precisely the same symptoms which marked the late epidemic. It began with violent pain and spasms in the stomach and bowels; which were followed by purging and vomiting, and all the signs of extreme debility."

It appears, by the foregoing history of the disease, and some additional reports of the Madras board, that cholera did not commence, as has been very generally supposed, in the year 1817 in India. From that date it seems to have taken on a more strongly marked epidemic character. We shall avail ourselves of the labors of the *Philadelphia health commission*, for a very brief sketch of the disease, from 1817 down to its appearance in Paris.

We are told that "the epidemic cholera commenced its destructive ravages in various parts of the Delta formed by the mouth of the river Ganges, in India, during the summer of 1817. Presenting many of the features of the ordinary cholera morbus, it had some symptoms superadded, which distinguished it from that disease. The chief of these latter are, the suddenness of the onset, and the rapidity of its course; the extreme exhaustion of the animal powers; the distressing cramps or spasms of the muscles of the limbs and body, which commonly attend it; and, more especially, its strongly marked epidemic character.

"Continuing its ravages from the period mentioned, by the end of 1818, the disease had pervaded nearly the whole of Hindostan, from the Himalayah mountains on the north, to Cape Comorin on the south; and from Bombay and Surat on the west, to Sylhet on the east. In 1819 it broke out in the kingdom of Arracan on the east; Penang and Java on the south east; and in the isles of France and Bourbon on the south west. The effects of the epidemic were, also, experienced still further to the south east, over the whole of the Indio-Chinese peninsula. In 1820 it prevailed in Siam, Malacca, the Philippine Islands, the southern province of China, and at Guzzerat in India. In 1821

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at Moscow middle of September 1830.) In April, 1831, Warsaw was attacked, Riga, in May, Archangel in June; in the latter month the disease appeared likewise in St. Petersburg, and in July at Cronstadt. In Dantzic in Prussia, the epidemic broke out in May, 1831, and at the same time in Brody and Lemburg in Austria. In Berlin the disease commenced in August, in Vienna in September; it likewise occurred in various parts of Hungary, and before the close of the year, it had desolated nearly fourteen thousand towns and villages. In October it suddenly appeared in Hamburg, and in different parts of the kingdom of Hanover. In the month of August, it made its appearance in the eastern part of England, at Sunderland, a sea port in the county of Durham, situated at the mouth of the river Wear. The disease did not however attract much notice 'till near the end of October. In December it prevailed at New Castle, on the Tyne, to the north of Sunderland, and at Gateshead to the south. It likewise appeared subsequently in various places to the west, and in different parts of Scotland. London became subject to the epidemic in 1832, and accounts have reached us, of its appearance also at Dublin, and other parts of Ireland, while at the present moment (May 1832) it is prevailing to an alarming extent at Paris and its neighborhood."

In the month of June, 1832, it made its appearance at Montreal and Quebec, and was attended with great mortality. The disease also appeared in New York, in the same month, and at Philadelphia in the month of July—presenting there, however, at that time, but a few sporadic malignant cases. We have been told in the newspapers of this morning, (25th July, 1832,) that the medical commission, sent by the board of health of New London to investigate the disease, that they were made acquainted with a disease precisely similar, in the winter of 1831-2, at which time it prevailed at New London. And, we are told in the London Medico-chirgical Journal, that, doctor Dobson has described the same disease as it appeared at Leeds, in England, in the year 1825. From that paper we shall make a brief extract, when we come to speak of the nature of cholera.

Of the character of Epidemic Cholera.—The first trait which we notice in this disease is that of its being *sometimes epidemic, sometimes apparently endemic;* but, we think, *always non-migratory.* With a view to illustrate this part of our subject, it seems proper that we attend to the usual meaning attached to the words epidemic, and endemic. An epidemic disease, says Webster, is one which seizes a great number of people, at the same time, or in the same season. And he tells us that "the influenza, of October and November, 1789, that of March and April, 1790, that of the winter 1824-5, and that of 1825-6, were very

severe epidemics. The signification of this term means nothing more than what has been assigned it by Webster, and other lexicographers; but, by a sort of general consent or usage, we mean by this term a disease which passes from country to country. It is extremely improbable that any disease possesses a migratory character—We have no proof of such a fact—the term, then, in strict propriety, means a disease which spreads, and may be confined to one neighborhood, or extend to several, and pass from one country to another, where they are contiguous—but to give it the character of an epidemic, it should have the property of extending itself, or of occurring at different places. And it is in this respect that we may draw a distinction between epidemic, and endemic diseases. "An endemic disease, (says Webster,) is one to which the inhabitants of a *particular country are subject*"—"The epithet is also applied to a disease which prevails in a particular season, chiefly or *wholly in a particular place.*" This latter is the true technical meaning of the word, and it is in this sense only that it can be of use, since if it means diseases which prevail in particular seasons, it would be in no respect different from the epidemic, and correct language has no synonyms. Modern observation gives but a very limited use to the term *endemic*, and, accordingly, we find it but little used—the *plica polonica*, and the goitre of the Alps, are specimens of what is meant by *endemics*.

The epidemic cholera is non-migratory.—The vast extent to which the influenza has been known to extend, over the globe, has long since given rise to the supposition, that a poison is generated in some part of the world, and spread by the wind over different countries. Our time will not permit of even a slight examination of this subject, as relates to the influenza, but we believe it will be found, upon proper inquiry directed to the point, that it does not cross the oceans. That such is the fact with cholera, we think there is the most satisfactory evidence.

It is true that the present epidemic, in the main aspect of its extension, has been westward—it entered Orenburg in July 1829, since which its course has been almost due west, till it terminated in Canada. If we were to look at this fact isolated from many others, we might conclude that the cause of the cholera had been wafted on to our shores, but when we look at the history of the disease, we cannot easily admit such a supposition. Thus the disease has often existed in particular places in the East Indies—it reappeared once at Orenburg—in *Persia it reappeared several times.* On the setting in of winter, it disappeared at Astracan, but recurred in the succeeding summer—the same disease appeared at Leeds in 1825—it is said to prevail a second time at Vienna—it existed in New London in the winter of 1831-2.

It has often appeared at one town soon after it was known to exist at one not far distant, while the prevailing winds have been opposed to it; this was the case at Hamburg, and often in the east. But, particularly, notwithstanding that the sea between the west coast of Scotland and Ireland, and Canada, are much frequented by our vessels, the fisheries at Newfoundland lying between, and many vessels having left Europe, freighted with persons who had imbibed the poison, and who suffered with the disease, yet, in no one instance has there been a case of cholera occurring at sea, or brought over sea to our shores. With such facts before us, we think nothing but pre-conceived opinions, formed without due reflection, can sustain the opinion, that the poison came across the ocean. We may be asked, from what source then have we this poison—we answer, that this is one of the mysteries which the Almighty Governor of this and other worlds, has not yet revealed to us; but it is obvious, we think, upon a moment's reflection, that the difficulty is in no degree lessened by supposing that the poison is brought by the winds from other countries. How can we conceive of a laboratory which shall generate poison in the Indies sufficient to be carried over all Europe, stopping at town after town, then travelling on again, while with perhaps one exception in several thousands places which felt its influence, they do not feel it again. To our apprehension, this circumstance alone is sufficient to disprove the belief that the atmospherical poison has came on from the east, traversed parts of Europe, and now fills a considerable part of this continent.

Since we have no control over this specific matter, whatever it be, it is not very material whether we can ascertain its source; but we think with Sydenham, and doctor Johnson after him, that it is an emanation from the earth. In briefly summing up the character of the disease before us, we view it as an epidemic dependent upon some atmospherical contamination—that it is mostly confined to neighborhoods of moderate extent, but sometimes happens simultaneously, or in near succession, in different places—is absolutely *non-contagious* and *non-migratory*.

Of the nature of epidemic cholera.—We think that the most important point connected with the true nature of cholera, is a proper understanding of the *relative nature* of its cause. To illustrate this, so as to be understood by the popular reader, we must advert to a few simple positions of a medical character, which, we presume, will be admitted by most physicians. Some diseases are the product of *specific causes*—thus we see that small pox will produce small pox—that miasm will produce bilious fever, &c.: these, then, are *specific causes*, because they always produce disease of one kind, as to *genus*, at least. But

we have also *fortuitous causes* and *fortuitous diseases*. Thus several different individuals eat to excess, or use articles that are highly pernicious, but all the same; presently one has a violent headach, another simply vomits up the offending load, another has his accustomed gout in the stomach, another has an attack of dysentery, or common cholera, another a mere diarrhea, &c.; here, then, is a specimen of *fortuitous causes* and *fortuitous diseases*. Well, let us apply this illustration—a person, in an ordinary time of summer, eats unripe fruit or the like, and has an attack of the cholera; this is a *fortuitous disease*, for we have seen it might have produced headach, dysentery, &c.; but who ever thought of this *fortuitous cholera* becoming epidemic. How then can cholera become epidemic?—by the operation of some general agent, and that general agent must be specific in its nature: it must have individuality, or property, and that property being peculiar, is properly termed "*specific*."

We shall presently see that this view of the subject is highly important, and calculated to obviate one of the greatest difficulties, we think, presented in the phenomena attending epidemic cholera. We are told by different writers, that in many of the cities, (and we may presume all,) there was a great deal of slight disease of the stomach and bowels, while the cholera prevailed, and generally before it excited much alarm—this was the case at Orenburg, St. Petersburg, Sunderland, in Canada, and in New York; and, at the present time, there are thousands of cases of that form of disease, in Philadelphia, and a good deal in Baltimore, and intermediately to those places. And many physicians tell us, that simultaneously with spasmodic or epidemic cholera, we have common cholera and dysentery. Now, if it be a fact, and this seems to be generally admitted, that the malignant cholera is an epidemic, to what can we, agreeably to any of the rules of reasoning, ascribe the milder cases, but to the same cause—either in a less concentrated state, or modified by the habit of body of its subjects.

To our apprehension, we may as well take up the intellect of a *Newton*, or *Bacon*, and say that none are men but such as come up to their standard, as to say that because the epidemic cholera, under certain circumstances, becomes malignant sometimes, none can be cases of cholera but such as come up to this standard.

It is well known that all great epidemics rule, so to speak, in the dominion of diseases—that a great epidemic once set up, all diseases assume more or less of its livery; and shall we have, notwithstanding this well known law, three epidemics prevailing at the same time, in the same place; such a fact is neither supported by common sense, which would not readily recognize

three different poisons afloat in the atmosphhere, nor to our experience, which shows us, that it is less common for two epidemics to prevail at the same time, in the same place, than for two diseases to exist in the same individual at the same time; and we know that the latter is very rare, so much so as to have induced some of the most sagacious medical writers to believe, that no two diseases could exist in the same patient at the same time.

We believe, then, that both the common sense view of the subject, and our medical experience, support us in the opinion, that there is but one epidemic affecting the people of some of our cities, in the form of diseased stomach or bowels. And it will follow, from this position, if well founded, that instead of one-half, one-third, or two-thirds dying of epidemic cholera, it will be found that there is not one in several hundreds.

Did time and space admit, we could go on to show, we think, that there is no disease uniformly malignant—thus it is well known, that in the yellow fever season of '93, in Philadelphia, there were many cases of bilious fever of ordinary grade; also, intermittents; this is common in all seasons. And do we not see small pox, notwithstanding the stable character which it presents, presenting now and then, cases that are very slight—it is true, these cases are reversed, but the principle involved is the same in both cases, that it, small pox, in the main, is a disease of great force, but presents a few mild cases—*the cholera is in the main, a slight disease, but presents occasionally very malignant symptoms.* These epidemics agree in this, that the same circumstances, as regards personal things, are equally predisponent to malignancy—subject the intemperate to the small pox, even in seasons disposed to render the disease mild under favorable circumstances, and your patients will die in greater proportion than they ever did in cholera, where civilized people lived, to say nothing of medical aid.

In summing up our views of epidemic cholera, we say it is a specific disease, caused by a specific poison floating in the atmosphere; that, therefore, there is but *one genus, one species;* but there are three well marked forms—these forms may be more or less blended, or may exist in succession—and this being an epidemic, is specifically different from common cholera morbus, which is fortuitous; they are materially different. Whether all epidemic choleras are the product of one poison, we will not undertake to decide—that the disease sometimes nearly resembles malignant bilious fever, there can be no doubt—and, we believe, in every season that bilious fever assumes a malignant form, more or less cases of it are reported as cases of cholera morbus.

To make ourselves clearly understood, it seems necessary that

we say a word or two respecting the exciting causes, under this head. Information collected from all countries, contributes to show, that cholera does not often assume its malignant form, except in the intemperate, the impoverished, and unclean. The epidemic cholera, and the common sporadic from surfeit or indigestion, do not present any thing anomalous in so nearly resembling each other. The common cholera, and the mild form of the epidemic cholera, present symptoms strongly similar; but agrees in this only, that in both cases, the same parts of the body are diseased; the causes may be different, and yet the symptoms may have much resemblance, because the same structures are involved. We see circumstances precisely similar in small pox, and other diseases, thus, a patient in the primary fever, has all the symptoms of severe fever, bilious or inflammatory, and it is not until the small pox fever has terminated in pustules, that we can clearly recognize it. The circumstances attending epidemic cholera, are nearly the same—in the single individual we could only recognize it, by its malignant aspect, but the peculiar symptoms of which this malignancy is constituted, characterize epidemic cholera, as completely as the eruption of small pox characterizes that disease—so that a few malignant cases, with many that are milder, establish the epidemic character; and the absence of malignant cases, without those *peculiar* malignant symptoms, establish the character of common cholera. We, therefore, say, that common cholera, and epidemic cholera, are essentially different diseases, resembling each other because they affect the same structures principally; but they differ in their essential nature, as much as measles, and small pox, or bilious fever, do from each other.

We are as ignorant of the mode of invasion of this poison, as we are of its origin. The most rational view of the subject is that of its entering the human body, through the medium of the lungs. We have neither time nor inclination to take up this subject at present, but it seems necessary that we should say a few words respecting its mode of operation. From the fact that premonitory signs have preceded epidemic cholera, in nearly, if not all situations where it has taken on the malignant form, and from the vast number who have this disease mildly, and that few, indeed, have the malignant symptoms of this disease, who live as they should do, we seem to be fairly warranted in saying, that the poison is always in a very dilute state, and operates sometime upon the constitution before the malignant character of it is manifested.

Whatever be the mode of invasion, we find that the derangement arising from its operation on the human body, is first perceived in the stomach and bowels—these, together with the liver,

&c., are interrupted in the ordinary secretary operations which obtain in them. The nerves, governing the functions of the secretions on the mucous surfaces of the first passages, are impaired in their power, vitiated secretions follow as a necessary consequence. But, while we admit this, we believe that the mortality of cholera arises from an impairment of the plastic operations of the human body. It is well known to physiologists that it is not more necessary that we constantly inhale the atmospherical air, than that the waste and impairment of our bodies, should be constantly and incessantly going on. We believe that in the milder stages or forms of this epidemic, there is an interruption of the digestive, and assimulating apparatus, which gives rise to the symptoms which characterize cholera: in consequence of a slight interruption of the plastic process in its first stages, the food is no longer formed into wholesome chyle, but the chyle becomes crude, and unfit for the purposes of assimulation, while, at the same time, the sensorial power seems to suffer generally, so far as it is concerned in the plastic operations. Arrest the diseased actions before the sensorial energies, and the *acretive fluids* are very materially impaired, and your patient recovers, but suffer it to reach a certain amount of derangement, and extreme danger, or death will be the consequence. In a word, no animal can live, (we mean the higher orders,) unless they be momentarily maintained in their plastic or renewing operations, and no sooner does this modification of a sensory cease to sustain our bodies, than they necessarily fall into ruin. Hence we derive the true explanation of the importance of so regulating our conduct as to keep the sensory, by which we mean the sentient parts of our bodies throughout, free from irregular, in moderate, or unsufficient operation. Here, then, is a clear indication; tranquillity and moderation, give health and vigor to the sensory. Again, impose as little duty upon the stomach and bowels as may be, since they are crippled in their power!—here is another clear indication, *take nothing into the stomach that is hard of digestion, or apt to impair the digestion by its quality, or the quantity taken in.* From these premises, we derive our prevention, and our indications of cure.

Of the cause of Epidemic Cholera.—We have already stated as our opinion, that the remote cause of epidemic cholera, is, some deleterious principle, which exists in the atmosphere.—The history of the disease shows us, that, it is vastly diffused at present, or that it exists in many places at the same time. We have seen that under the better circumstances attendant upon human life, or that condition of things in which it is our duty to place and hold ourselves, this poison is disarmed of its malignant power. This poison of the atmosphere, from its produ-

cing a vast number of similar cases of disease, at the same time, must be considered to be of a specific nature—we, therefore, term it a *specific cause.* It is what the schools of medicine have termed a remote cause; and the character which we have seen it presenting, shows it to be specific, and, therefore, it can only produce one disease; but that disease may exist under different modifications, and this we know to be the nature of all specific diseases—small pox, varioloid, and perhaps chicken pox, are probably but modifications of one specific poison.

The schools of medicine have found it necessary to take into account, what they term exciting, or occasional, or predisponent causes. These are sometimes, if not always, to be viewed in the light of agents which beget a susceptibility to disease. In the case before us, it is found by experience, that certain things relating to food, drink, the condition of our dwellings, and premises, generally, and such like, facilitate the inroad of cholera, and gross abuses of those things not only invite the disease, but give to the specific poison, by which the disease is always constituted, all its malignancy. Here, again, is a clear indication, and we are made sensible by it of the goodness of God, in imposing such a *nature* upon most, if not all, specific diseases—thus small pox, which is, perhaps, the most fatal malady known, can only attack such as have a susceptibility to the disease; and the disease having once extended, its influence upon the body destroys the susceptible condition of the system, with perhaps an exception in many thousands. In cholera, we have seen that thousands and thousands may inhale the poison, which gives rise to that disease, and they suffer nothing but a temporary derangement of the healthy condition of the stomach and bowels, provided they have recourse to proper precautionary measures, and have not set up a susceptibility in their bodies by improper living, &c.

The schools have long treated of what is called the proximate cause of diseases, but many able men have denied the existence of any thing to which we can fairly apply this epithet. This is, perhaps, a matter of no great importance in a practical point of view, but if we were to notice any phenomenon as deserving of such a name, we should say that the cause of all the symptoms, or rather the foundation on which they may all be rested, is a prostrated or reduced energy of the distributive portion of the sensorial organs. This reduced state of the nervous energies, gives rise to a morbid or preternatural irritability and sensibility; and, this is of such a nature as not to lead generally to a state of reaction, or much ordinary febrile action—on the contrary, the essential nature of cholera is, that, its early stages depend upon reduced energies of certain portions of the distributive ap-

paratus of the *sensory;* and this reduced state of these energies, lead to spasms which are mere symptoms; but especially to interruption of the plastic powers, the impairment of which constitutes the disease. The state of the blood, secretions, excretions, &c., belong to the pathology of the disease, and will come most properly under the head of symptoms of the disease. It would seem as if the morbid condition, which is ultimately set up in the general system, originates in the nervous fibrils on the mucous surface of the stomach and bowels, and hence the advantage of large opiates, whenever severe pain indicates that the derangement of these parts, is about to extend its domains and involve the whole body.

It has been imagined by some medical men, notwithstanding their most decided conviction that, the remote cause of cholera is in the surrounding air; that, nevertheless, under certain circumstances, a poison may be generated in the human body, which shall have the same properties as the atmospheric poison; and in this way the disease becomes *sometimes contagious.* We think that a little attention to a common sense view of this subject will satisfy the unprejudiced, that, no such thing can exist, since it would be contrary to every thing in nature. How shall we admit that things on the surface of the earth, or, to use a familiar phrase, the *elements*, in some of their widely diffused operations, shall generate a certain poison, and that the human body, while governed by laws of life, shall generate a similar poison. Admit that a poison from without, may be generated by the *elements* and excite a disease within; and, admit that that disease creates a poison—this must be a poison of an animal nature; while the other cannot be. Let us for illustration sake suppose a poison has entered; and, the human system generates another: here, agreeably to all our notions of generation or production, the extraneous matter is one parent, the body acted on is the other, can we suppose that the offspring will be similar to the former? Does not every thing analagous in nature show us that, parents of dissimilar kinds will produce offspring different from both—nature has indeed been very sparing in the production of hybrids or mules; but, invariably, unnatural generation gives rise to products which, in their nature, have properties *sui generis.* Surely, then, if a poison be generated by the human body, during the existence of cholera, that poison will be peculiar; and is as likely to produce almost any other disease as cholera.

The very fact of cholera's being of an epidemic character, proves that it must be the product of an atmospherical cause, and, consequently, of a specific nature; and being so, it can have but one source of production. Let us then have no *half-*

way contagions! nor *double contagions!* It may be said that, small pox, which is a specific disease, also partakes of an epidemic character. In this, it only resembles cholera, so far as there must be a *susceptibility* in both cases; the atmosphere gives increased activity to small pox, during some seasons; not, however, by effecting any alteration upon the *virus;* this is uniformly the same, and is always cognizable to our senses, whereas cholera affords no sensible product, and is obviously the product of some atmospherical contamination, to which must be superadded some impairment of the *constitutional powers*, from improper living, or a more common contamination of the atmospheric air. Small pox may diffuse its virus through the air, and thus infect persons predisposed to the disease, but the matter must first be generated in an animal body; and all history and observations are against the supposition that, this virus ever arises spontaneously. The matter giving rise to cholera being always, as far as we know any thing positive of its nature of spontaneous origin, can never be of animal origin. It is one of the properties of this poison that it never exists long in the same place. While we know that with all the skill and philanthropy of the present age, and notwithstanding vaccination, small pox has never been banished from London for the last fifty years, and perhaps for several centuries.

It might be made a question, whether the more common effluvia arising from our foul premises which are known to contaminate the atmospheric air, and to increase the operation or power of the *cholera poison*, operate by amalgamating with it—if that were the case, then all persons would be equally, or nearly so, liable to be overtaken by epidemic cholera; but, seeing that there is a vast difference in this respect, we must ascribe the phenomena presented in the case to an alteration made upon the human body, by the more common effluvia; and this altered state we have thought proper to regard as a condition of susceptibility.

Prevention of the Epidemic Cholera.—It seems proper that we examine this part of our subject under two divisions—*public*, and *personal* means of prevention. Of the public, it may be remarked, in the first place, that the history of this disease, for a series of years, supports the belief, that low or marshy, and crowded situations, are most infested by epidemic cholera. The lower parts of towns, particularly where they are crowded, filthy, and illy ventilated, and along the margins of rivers, &c. In short, in situations where diseases are apt to prevail, which have for their cause malaria or miasm. But, notwithstanding, the certainty of this obtaining generally, there are many exceptions where the disease affects towns, and districts of coun-

tries, that are not generally subject to miasmatic diseases; and, moreover, notwithstanding that this poison is generally arrested in its career, during cold weather, as in miasmatic diseases, still, in some instances, it has appeared in the winter season—in this respect differing from miasmatic diseases.

It is not more certain that epidemic cholera inclines to spread along low and damp margins of rivers, &c., than that persons of correct habits are almost never overtaken with the malignant form of the disease, even in such situations, nay, we believe never, unless they be guilty of some great imprudence, in regard to some of the personal circumstances which we shall presently notice. Such being the fact, we see how little cause there is for removal from cities, or parts of cities, that enjoy exemption from extremely faulty location, or extremely bad ventilation. As regards the city of Baltimore, such is the favorable condition of her location, that we are fully convinced, that in the greater part, nay in nineteen twentieths of the city, the chances of escape from miasmatic diseases, and we may, therefore, presume from epidemic cholera, is equal, and, indeed, greater than in most parts of the surrounding, or any other parts of our country, excepting, perhaps, some of our mountainous situations.

Such being the case, we have no hesitation in saying, that the chances of escaping danger from epidemic cholera, will be greatest to those who remain at home. If they will, while here, carefully observe the regulations of a personal character, which we shall presently offer, and promptly obtain medical aid in the event of an attack, they will be infinitely more secure than by attempting to fly from the enemy. This being an enemy in ambush, we know not when we are running from it, or to it!—Our running from the cholera, is something like the travelling of a horse in a mill, he travels all day and is found at the end of the day where he started.

We must not forget that this is a very dilute poison, that its operation seems to be gradual, and of some continuance before those exposed to its influence are really sickened—the body remains some time in an excitable state, and almost any change, suddenly made, will, by disturbing the usual *internal operations* belonging to health, render the body more likely to fall into disease, from the lurking poison. Besides the chances of immediate aid in both the medical, and nurses departments, is an item of vast importance; in town you can command it instanter, in the country you may or may not, as you shall happen to be overtaken.

To sum up our views as briefly as the subject will admit, we say that there is one cause, one medium or susceptibility, and

one disease connected with the subject of epidemic cholera.—There must exist a specific matter in the air, this can only operate through the medium of the human system, and its operation which is founded on a condition called a predisposition or susceptibility, gives play to morbid action.

From these positions we draw the following conclusions; the *specific cause* being invisible, and its real nature unknown, we cannot shut it out, or avoid its approach—the human body presenting a medium for its reception only, while we are exposed to certain things, we have only to avoid those things which we know to be subservient to the formation of a medium, and we shall escape the disease. Here, then, we not only perceive how we may avoid, at least the malignant form of the disease, and see how a kind providence shields the better part of the human race from this scourge. We perceive not only that it is our duty to live as becomes an enlightened and refined people, and thus, as far as in us lies, contribute to the glory of God; but we see what is always indeed before our eyes, but less strongly marked, that our duties towards God, to our neighbors, and to ourselves, are never practised without their reward—the instance before us seems in an especial manner to point out the advantages of civilization, and especially of some of the improvements, made in the condition of mankind in modern times. Enlighten the heathen, reclaim the drunkard, break down lordly power, infuse the spirit of freedom and self-respect throughout mankind, break down monopolies in governments, destroy the vassalage of the many, reclaim the vicious, which will be best effected by giving them the rights of freemen, and much will be done, and in these respects has been done. We may be told, that, men are vicious under all governments—this we must acknowledge, but vice is lessened in amount by making men responsible creatures, and, after all, it is only those who are too base to enjoy the blessing of freemen who disgrace themselves; and as far as their example goes, all mankind. Having disposed very briefly of some of the more general topics, we shall now particularize a few that are less general, though of a public nature.

We should avoid crowded assemblies; our countryman Noah Webster has, many years since, pointed out the evil which frequently arises in crowded assemblies, in our legislative halls—and, we have observed that the legislature of Maryland suffers a good deal from diseases of the chest for some years past, which we think is attributable to the contamination of the air in their crowded halls.

People should not be suffered to crowd into small houses; indeed, not more than a reasonable number should inhabit even larger houses. In times like these it is both the duty and interest of landlords to guard against this evil. And hence, we see how important it is that, delapidated houses should be removed, and better put into their places: it would be the interest ultimately of the rich to buy up such property, and put up better buildings; such an enterprise would be greatly conducive to public health, as regards other diseases as well as cholera.

The precincts of cities being almost always unhealthy, and this state of things being owing principally to filth arising from manufactories, drains, and ponds, &c., much of the evil could be removed by proper attention, to keeping such places perfectly clean, and prohibiting such as are most objectionable.

It has been found that persons who occupy low dwellings, cellars in particular, are very liable to this disease—it follows, that these situations should be avoided, particularly at night: all persons should therefore occupy, as much as can be, upper chambers for sleeping in.

Too much pains cannot be taken to cleanse and keep clean every lane, alley, court, street, yard, dock, cellar, lumber yard, privy, &c.; and, when every thing offensive is removed, lime should be freely used; the common acts most durably, the chlorides of lime, soda, &c., most speedily, and therefore less durably —cellars should be thoroughly cleansed, and then whitewashed.

In time of danger the citizens should distribute soap, and insist upon the poor that they make clean their persons, clothes, and bedding. *Where the clothes and bedding are disgustingly filthy, they should be burnt.*

Offals and perishable provisions, whether vegetable or animal, fresh or salted, should be carefully watched, and removed as soon as they become tainted. A great amount of evil arising from filth, would be removed if more refuse matters were burned, instead of suffering them to accumulate in heaps, or throwing them in the streets. We may have overlooked matters equally important as some of those we have pointed out—it is our desire to be brief, and, we trust, enough has been said, under this head, to enable persons to perceive what is likely to be injurious. It has been said that knowledge is power—while we admit the truth of this position, we would remind our readers, that, in this case, it can only be true so long as we strive to avert the evil, by the employment of such measures as we know to be preventive in their nature, and persevere in such measures to the end.

Among the measures preventive of malignant cholera, we would notice the speedy removal of the poor from neighbor-

hoods that seem to be most affected; and it is a remarkable fact, that in a very great majority of instances the malignancy of this disease has been confined to a particular neighborhood, and removal might, therefore, have been effected much to the relief of the poor and those who have to provide for them.

We come now to notice some of the measures of prevention, of a personal nature.—The first thing which presents itself here is, the increased liability to the malignant form of cholera, from fear. It being a well attested fact, that, many persons suffer from this source, too much pains cannot be taken by every one to regulate their conduct so as to guard, as far as possible, against it, and to use their endeavors to quiet the apprehensions of the timid.

All extremes should be avoided in regard to our exertions, mental and bodily—we should live abstemiously, partaking generally of what we have been accustomed to, and guarding against too much variety on the same day. Instead of overloading the stomach, we should take care to eat and drink so as to give the stomach full opportunity to digest or carry away what we take in. And it is always best to eat pretty early in the morning, particularly if we have to go abroad early.

Persons in general should abstain wholly from spirits, wine, malt liquors, and, indeed, every drink but water. Those who are accustomed to dram drinking, or drunkenness, should daily and regularly lessen the quantity they have been accustomed to.

Physicians and public men who visit sickly places, or whose duties require great exertions, should be careful to avoid too much fatigue, or night watching—if required as a source of profit, a reasonable amount of labor should be performed and no more; if public duty requires it, humanity and the public interest will be best promoted by a reasonable exertion; and no more than a fair portion of labor should be performed.

Pains should be taken to keep the body clean; for this purpose, washing or bathing the body about twice a week, while the weather causes much perspiration; or, once a week in moderate weather, will be proper; but we would pointedly object to too much bathing in warm water, but, especially, none should remain more than a few minutes in the warm bath at a time.

Avoid the night air, and crowded places, also sleeping in lower rooms, or in small crowded apartments.

Nothing perhaps is more dangerous than over-loading the stomach, too much exertion in the hot sun, and drinking rashly of cold water, while heated, whether by the sun or labor.

It has been said by the great Sydenham that, more die from inattention to clothing, than by war, pestilence, and famine; and doctor Rush has told us, to adopt as a rule, that it is better to

err on the side of dressing too warm, rather than the opposite extreme; and it has been remarked by many writers on cholera, that attention to clothing is all important. In changeable weather, we should endeavor to conform to the more remarkable changes, and especially we are directed to keep the body warm by wearing a belt of flannel; but where there are strong objections to flannel, muslin may be substituted, observing that it will require frequent changing.

Strict attention to the foregoing precautionary measures, will afford much security; and whatever may seem improper, should be avoided—remembering that *moderation* and *regularity* are principally to be relied on: ONCE RIGHT ALWAYS RIGHT! remembering only that we should consider ourselves, in some degree, in the state of invalids, seeing that while the atmospheric air keeps the poison of cholera afloat, our bodies are impaired by it; but, if taken care of we can battle it out with the deadly foe, by disarming his arrows of their deadly poison, and thus we exchange the cannon of our foe, for bullets that cannot pass through our walls of defence.

Of the symptoms of the Epidemic Cholera.—In entering upon this subject it becomes necessary to remind our readers of the view, which we have already presented, in speaking of the nature of the epidemic cholera; i. e. that there is only one disease, but three different *forms* or *stages* of it. To illustrate this part of our subject, it seems necessary to notice the different names which have been proposed for cholera. The only terms which we deem worthy of notice are, the Asiatic, Russian, spasmodic, and cholera asphyxia; also, epidemic cholera. The two former names are nothing but accidental associations, and do not serve to designate any form of disease, any further than to show, that a disease similar to that in Asia prevailed in Russia, and appears since to have visited Europe and America. The term spasmodic, serves merely to point out one of the most distressing symptoms in the malignant form of the disease, and often in cholerine. Cholera asphyxia may be used for the malignant stage of the disease, since, as we have elsewhere endeavored to prove, the evil tendency of this disease is, to interrupt, and ultimately to destroy the plastic, or sustaining power of the body—and the remarkable sense of sinking which attends the malignant stage of the disease, serves to make the term asphyxia, in some degree, proper.

We have been led to consider epidemic cholera, as the most suitable epithet for the disease under consideration, and the disease appearing in different forms, but all the result of one remote cause, we think the most judicious arrangement, which we can make of the subject, is to distinguish the disease by

the name of *epidemic cholera*, and divide this into different forms—*cholerine*, *cholero-dysentery*, and *malignant* cholera.

We are told by physicians who witnessed the disease at Orenburg, St. Petersburg, Sunderland, Montreal, New York, and many other places, that the malignant form of cholera was either preceded by, or concomitant with the milder forms, and, indeed, while most persons have felt its effects in those milder symptoms, very few, comparatively, have had the malignant form of the disease.

The milder forms have prevailed for some time past in Philadelphia, and in this city, and as all have seen a good deal of this form of the disease, we shall describe its symptoms, in preference to copying the accounts of others.

First of *cholerine*—This usually commences with sick stomach, and severe vomiting; a sense of tension around the abdomen, and about the stomach; also a purging more or less severe; the matter vomited is mostly of a bilious character at first; sometimes acid; when the vomiting is not soon checked, the matter ejected becomes watery and slimy. The first discharges from the bowels are often, at first, in greater part fecal, then bilious; in some instances they were as dark as coffee grounds, which they resembled; most patients spoke of the stools being watery, sometimes light colored, sometimes, but seldomer, dark. In most cases the discharges, upwards as well as downwards, were less copious than in most severe cases of ordinary cholera morbus; with one exception, in which we were assured, that four pot fulls of watery fluid were passed in one night. We did not find arterial excitement which seemed to require the use of the lancet; but we sometimes found the skin warm, and a moderate degree of febrile action; in all these cases, the tongue was coated thickly with a yellow fur—the head was seldom affected with pain or distress; respiration not at all disturbed, prostration never remarkably great—stomach seldom rejected the medicines that were given. Some cases, most indeed, were attended with cold skin, and clammy perspiration; in these cases the arterial action was a good deal reduced, and we always found the tongue having a thin white coating. The speed with which other symptoms abated, upon using remedies, was not more remarkable than the cleaning off of the tongue: we have seen it extremely foul, and on the second day afterwards, it has been perfectly clean, a sure indication always of a mild form of disease.

Cholero-dysentery form of the Epidemic.—This form of the disease was attended pretty generally by symptoms very much resembling those we have described, as belonging to the cholerine form of the disease. The more remarkable peculiarities were

greater arterial action, a yellow coating of the tongue, as the predominating cast, or, perhaps, uniformly so—there was often a good deal of pain or heaviness of head; sometimes sickness at stomach; mostly, however, it was slight, and we never saw any thing like severe vomiting. The above discharges were small, and consisted of mucus principally, a good deal streaked with blood; in one or two cases the quantity was pretty considerable—we heard of a case where it was considerable, but it terminated favorably. We also saw a case of severe vomiting in which very considerable quantities of blood were vomited up. We met with a few cases of this form of the disease which required one pretty free bleeding, but never more. In this form of the cholera there was the same remarkable early cleaning off of the tongue.

In short, we think, the two forms of cholera already noticed, may be sufficiently well, and perhaps most correctly described, by saying that they presented the phenomena of mild cases of cholera morbus, and dysentery. We did not witness a single case in which we were apprehensive of any material danger, and but very few cases that became protracted to a period of several days, or a week in most instances, both in cholerine and the dysenteric form, patients were relieved in one or two days, often in a few hours. Our patients were nearly all adults; indeed it has so happened that we have had far less cholera infantum under care during the present summer, while we have had a far greater number of cholera in adults than usual.

Of the malignant form of Cholera.—Not having had a malignant case in our care, we must borrow our description from books. Before proceeding to describe this form of the disease, we would remind the reader that, it has been generally observed, that the malignant form of cholera is preceded by the cholerine, or the dysenteric forms of the disease; but we are assured that sometimes the disease appears suddenly clothed in all its horrors, and terminates fatally in a few hours, without any premonitory signs.

The following case translated from the German, and which occurred at Hamburg, we believe to present one of the most perfect cases that can be found. Those who are conversant with diseases must be aware of the great irregularity of symptoms in most diseases, and not less in epidemic diseases than others. We need not stop here to inquire into the subject further than to cite the fact with a view of illustrating our opinion with respect to the circumstance that, notwithstanding the diversity of symptoms which we have mentioned, every disease is characterized by certain pathognomonic symptoms; and as a case of disease, shall present more or less of these signs, so is it more or

less *pure* or *perfect*, in its nature. In this way we get a sort of standard, which serves to distinguish one disease from another, and although we meet with many anomalies, still all that present certain signs, are referrable to some one disease, and as the signs shall more or less resemble *the standard phenomena*, so is it more or less *perfect*. We, therefore, present the following as one of the most perfect in its kind, and being so, it may serve to characterize the disease, provided that we notice a few anomalies. We quote the following from the present No. of this Journal, page 23:—

"The following case is so strongly marked by symptoms of malignancy that, we deem it worthy of record. This was a woman Anna Garren, aged 35 years, and an inhabitant of a deep cellar. She sickened on the 10th of October, in the afternoon, and was taken to the hospital. The day before her attack, she was quite well, and slept well the night before—she was attacked with violent purging and vomiting, and violent pain in the belly. When she arrived at the hospital, the whole body and the tongue were cold as ice; the face looked as if frozen, the hands appeared blue with cold; the eyes deeply sunken in, the tongue coated white, but was moist, the pulse imperceptible—soon after there was vomiting and purging of a thin, colorless fluid—great anxiety, and violent cramps, particularly in the feet—the precordia in great distress, particularly towards the back. She was immediately subjected to an alcoholic bath, at the temperature of 35° R. The skin became moist, but not warm.—She took some trifling doses of calomel. By making four large orifices in the arms, about half a pint of thick tar-like blood was obtained. An hour afterwards, she thought herself upon the whole better, but complained greatly of the distress at the precordia, particularly at the back—the spasms, the vomiting and purging went on, the skin was a little less cold, but there was a cold sweat—expression of the face a little improved.

"Evening, at 6 o'clock—The face a little warmer, and not so much of the expression of extreme coldness, and covered with warm perspiration—countenance improved, less of the characteristic distortion—the voice improved, no purging, or vomiting, tongue moist, coated whitish, and is warm; respiration more free; *sinapisms produced extreme sufferings;** the pulse bearly perceptible; the legs warm to the knees, below that quite cold; frequent spasms, but less violent than heretofore. Warm jugs to the feet, and sweet oil to the parts which were reddened by the sinapisms.

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* Dr. Diffenbauch tells us that, notwithstanding the reduced circulation in the skin, its sensibility is not diminished.

"October 11th, day after admission—The patient has had but little sleep, and has vomited and purged several times—the cramps less frequent, has *voided no urine.* The tongue coated brownish yellow. The upper part of the body covered with sweat, the lower extremities cold, the hands cold and livid, (red blue) the fingers drawn inwards; the pulse imperceptible. She was rubbed a long time with equal parts of ol. terebinth, and caustic lig. ammon. At noon the symptoms have become worse; in addition to pulselessness, and laborious respiration, the whole body is as cold as ice, and the hands blue. She was put into an alcoholic bath, at 45° R., where she remained 25 minutes, and felt better; the skin became again moist; an hour after this she presented the aspect of a person in typhus fever, and death came to her relief at 3 o'clock. It will be recollected that, she sickened on the 10th, early in the morning, and died on the next day, about 33 or '4 hours after the attack.

We consider the above case a pure specimen of the epidemic cholera in the malignant form; and it is remarkable only for not having been preceded, if we can rely on the report of the patient, by cholerine, or dysentery. She may have "slept well the night before" her attack, but may nevertheless have had slight disease of the bowels a few days before—all diseases, however, occasionally present some anomalies; but it is a well established fact, that as a general thing, the milder forms or stages of cholera precede the malignant. It is always presumed that an examination of the dead body is calculated to throw light on the nature of the disease,—which may have preceded the death, we, therefore, have thought proper to describe the appearances presented at the dissection of the body of Anna Garren.

Outward appearance of the body.—The face much sunken in; the eyes drawn outwards, and deep into the sockets; the abdomen bloated; the extremities contracted inwards; the fingers drawn crooked; the hands, particularly the right, livid as far as a little above the wrist.

Opening of the head.—Upon making an incision in the soft parts covering the head, much venous blood escaped—the dura mater was much injected with very dark blood—cutting into the substance of the brain, much dark blood escaped, the lateral ventricles were filled with a limpid watery fluid; there was also some effusion of water into the third and fourth ventricle.

Opening of the chest.—The lungs, with the exception of a slight adhesion, were sound. The heart was found very large, and flabby.

Opening of the abdomen.—The liver outwardly pale, inwardly moderately filled with very dark blood; the gall bladder distended with a yellow greenish bile—nothing remarkable in the sto-

mach, except some red spots on the inner coat—one ulceration in the intestines—the *cæcum quite full of the characteristic white matter of Epidemic Cholera, the aorta* and vena cava filled with carbonized blood, (black,) *the bladder drawn together.*

We have already said that, the foregoing is one of the most perfect instances of the malignant form of the epidemic cholera. We have, therefore, very little to add to the symptomatology of the disease: it seems proper to remark, however, that the disease at Hamburg, and some other places in Europe, presented traces of greater injury having been done to the brain, than seems to prevail in this country. The present writer was assured, in Germany, by several respectable physicians, that febrile affections of all kinds exhibit a tendency to encroach upon the brain, in that country; and we predicted, as probable, that the disease in America would be found concentrating its force upon the biliary organs, and this we believe is now the case. It has been remarked by doctor Hartshorn that, notwithstanding that patients in New York retain their senses, and that no remarkable appearances, we are told, present themselves upon the dissection of the head; still there is a peculiar kind of stupor or indifference, which either deceives, or in some way lessens the sufferings of the patient, and abates his anxiety as to the issue. This is one of the symptoms which strongly characterizes epidemic cholera.

Summary of the signs which serve to distinguish Epidemic Cholera from Cholera Morbus.—We may first mention the strongly marked epidemic character of the disease; the strongly marked spasms; the peculiar tendency which the disease has, to assume a malignant form in the intemperate; its greater prevalence in particular locations of different towns; the amount of lividity is peculiar, the wrinkling of the skin upon the hands and fingers, the exsanguineous condition of the skin, and its arid and hardened state, which has been resembled by doctor Diffenbauch, and others, to parchment; the tendency to, and the actual coagulation of the blood in the living vessels, the black or decomposed state of the blood in the heart and aorta, as we have seen by the experiments of our friend and correspondent doctor Diffenbauch; the absence of urine; and, the contracted state of the bladder after death, and particularly the whitish matter which is found in the intestines after death, and the *rice water* and other light colored fluids which are so frequently discharged, as well by the mouth as per anum; this at times very much resembles peas mashed in water, and has been resembled to it by doctor Dobson at Leeds. We have seen a case this morning, of cholerine, in which this discharge occurred to very great extent, and so exactly resembled mashed peas in water, that it might have

been mistaken for it, if it had not been for the extreme fetor which attended the alvine discharges—that thrown up was also slightly fetid, and contained more mucus; both contained a good deal of lumpy undigested matter.

We have already stated as our opinion, that the destructive tendency of cholera arises from an impairment of the plastic operations—the white mass spoken of seems to indicate that, it is the result of a detained chyme, and it is not improbable that the lacteals either regurgitate their contents, or, that, while the absorbing vessels imperfectly take up the chyle, the exhalents on the same intestinal surface pour it out again. This seems the more probable from the fact that, fresh blood will not amalgamate with that of cholera patients, as was ascertained by doctor Diffenbauch, who found that even blood drawn from the arm of a healthy person, would not mix uniformly with the blood of cholera patients—now we know that before the chyle reaches the blood it has been brought much to resemble blood in its composition; and hence it is, that it readily mixes with the blood in the vein, but let us suppose that the chyle is imperfectly prepared, or that the blood no longer has any affinition to a union with it, may there not be something like a regurgitation of the chyle? We have not room to pursue this subject; we have thought proper to drop a hint, and may hereafter take up this part of our subject more fully.

Having now described the epidemic cholera as it appears in the forms of cholerine, of cholero-dysentery, or malignant cholera, and attempted to illustrate the disease, by a very brief notice of the appearances presented on dissection, we shall speak of the treatment.

Treatment in the form of Cholerine.—We need not again notice the symptoms—indeed the disease is so readily known, that we might have contented ourselves with merely mentioning the name of the disease, as regards the treatment; but we are desirous of showing that, the common apprehension is erroneous on this subject; we mean the opinion that there are three epidemics prevailing, wherever we find the malignant form of cholera.—Cholera morbus is sufficiently known at the present time by symptoms of vomiting and purging; for, whenever a person during the present epidemic is overtaken with these symptoms, no time should be lost in using measures for relief. We will briefly relate the treatment, which has so far proved entirely satisfactory, so far, and it has been used in a very considerable number of cases. ℞. Supercarb. soda ʒj. ol. sassafr. gt. v.—Tinct. opii gt. lx. aq. puræ ʒvj. Of this a table spoonful is to be taken every half hour, till three or four doses are given; then once in an hour, or two hours, as the urgency of the case may require—after the

second or third dose, we direct ℞. submur hydr., pulv. jalap, à gr. x., vel xij., nitrat. pot. ℈j. misce divid. in chart. iij: One to be taken every three hours. We have found the stomach to become composed by this treatment in every instance, so as to bear a portion of castor oil, six or twelve hours, after the last powder, provided they do not operate freely and produce more natural stools—with one or two exceptions, this course has completed the cure, in these exceptions we used laudanum, or laudanum with spirits of nitre, alternately with Seidlitz powders, or castor oil, or magnesia. When the tongue was coated with a yellowish fur, we have always repeated the calomel once or twice, or the compound powders above mentioned. We have enjoined total abstinence from solid food, while there was nausea, or coating on the tongue. For drink we have given preference to weak warm teas of pleasant herbs, as common drink; and green or black teas morning and evening as a cordial draught at meal times, also toast water, or rice water. Chicken water was generally allowed, because we have not seen much general excitement at any time, and we have heard with pleasure of one case where chicken water, made very salt, and drank freely, speedily arrested a severe case of cholerine. We have long thought that salt would be a valuable remedy in this disease.

We were induced to try the alkaline treatment in cholerine, from having obtained very decided good effects from it in a former epidemic—in this Journal, vol. 1, we have an article on epidemics, from which we extract the following:—

"Let us now turn our attention to a few cases of disease which occurred in the year 1806. In doing this we shall literally copy from our note books—we there find the following cases:

Case 1. James Williams, (this was a young man.) First case of remittent fever—called eight days after the attack, extremely ill, great heat and burning in the stomach, and violent vomiting; uncommon loathing of food; insatiable thirst; *stiffness and severe pains of the arms and legs;* light chills every other day, but constant burning fever. Vomits great quantities of blood, as I was informed; his skin and eyes very yellow. Bled 16 ounces. Fol. Sennæ. man. supertart. pota. ℥ij. carb. sodæ ℈ij. misce, ft. decoctio. This decoction, taken in small doses, quieted the stomach, and relieved both the vomiting, and the pain in that viscus." The *vomiting* and *stiffness* having ceased, other remedies were employed, and the patient finally recovered.

Case 2. May 23. David Sheitz, attacked last night about 11 o'clock with violent Cholera Morbus—saw him at 7 o'clock this morning, symptoms very violent—to *appearance just expiring*; eyes sunken and turned up—constant vomiting, great burning and aching in the stomach. Patient observed that his heart

felt as if confined in a press—pulse scarcely perceptible, but corded, and very frequent, *alarming cramps* extending *from the lower extremities to the abdomen.* ℞. Carb. soda, ʒss. aq. puræ cochl., magn. x. spoonful every half hour. Gave 60 drops laudanum, vomited immediately after taking the laudanum, but was easier. Ven. ad. ℥x. Half an hour after the first he took a second dose of laudanum—40 drops; he was perfectly easy in half an hour. Patient recovered speedily.

Case 3. May 24. Mrs. Welsh has had slight headach several days—violent to-day—with excessive vomiting and indescribable sickness at stomach—expresses her feelings by saying that she feels "precisely as if she had taken an emetic." Advised a scruple of carb. sodæ in 10 table spoonfuls of water—a spoonful every half hour till easier, then less frequently; second dose quieted the stomach, and she slept well all night. Very soon recovered.

Case 4. Peter Kulp.—Complains of pain in the stomach and intestines, since 21st inst.—this day attached with Cholera Morbus, slight fever, suffused eyes; abdomen inflated so as to appear through his clothes. Gave the soda mixture with 10 drops of laudanum with each dose every half hour; third dose relieved the flatus. This mixture, continued at longer intervals, soon relieved the symptoms.

"Case 5. Christian Creizman, attacked on the 30th by cholera. Symptoms have been increasing, and is very ill to-day—complains particularly of feelings of coldness. The mixture of soda and laudanum relieved him in three or four hours.

"Case 6. Nicholas Chronbauch Childs—had a slight attack and soon recovered, upon the use of soda and some evacuants.

"Three or four persons have died near town of dysentery, I did not attend any of them, the disease was confined to one neighborhood adjacent to large mill dams."

The dysentery became common in the month of June, and now and then we had a case of Cholera Morbus—and bilious fever also prevailed, in some of which we have noticed the presence of *severe spasms.* We trust we need offer no apology for being a little particular: we have thought that since we have found the alkaline mixture answers a good purpose in the present epidemic, it will be received with more confidence from my having had some experience of its efficacy in former years.

Pathology of Cholerine.—It will be recollected by the medical reader, that in almost every case of dissection after cholera, there has been observed an absence of bile in the intestines, and a quantity of that fluid in the gall bladder, so much mostly as to render that viscus turgid. And notwithstanding that it has been remarked by some writers, that common and bilious matters are

sometimes voided in the early stage of *cholerine* and *cholero-dysentery*, this is merely what may happen to be present in the large intestines at the time of the attack; and as soon as passed off, the discharges become of a light, or of a whitish color. It is known that there is an absence of bile in the intestines, and that the large intestines become filled with the *whitish mass*, as the disease progresses. There is observed after death, some redness of the inner coat of the stomach, and often of the outer coat of the intestines—this, together with the spasms of the abdominal viscera, at times, and of a sense of spasmodic tension of the abdomen, shows that there is a degree of morbid irritation set up on fast as it is taken up from the intestines by the absorbents; or there the surface of those viscera, (the stomach and intestines.) These circumstances have led us to form the following views of the nature of *cholera*.

The remote poison, by its operation, induces a morbid irritability of the surface of the passages, so much of the digestive process as is effected by these viscera, is impaired, a spasmodic closure of the gall duct takes place, the bile regurgitates into the gall bladder; the absence of bile seems to interrupt the assimilating proces still further, and the *chyme* (the mass into which our food is formed before it passes into the intestines in a state of health,) remains principally in the intestines, the peristaltic motion going on, the detained mass is lodged in the large intestines, where it becomes a morbid irritant—and it is highly probable, that in addition to detention of the *chyme*, that the lacteal apparatus does still imperfectly prepare a portion of chyle, and that this may be thrown back into the intestines, by the exhalents, as is probably regurgitation of the chyle from the thoracic duct, by a spastic action on that tube, as suggested by doctor Good; or, again, there may be, in a more advanced stage of cholerine, an indisposition in the chyle to unite with the blood in the vein, into which it is usually conveyed. This opinion is rendered plausible, at least, by the experiments of doctor Diffenbach, who found a great want of affinity between the blood of a cholera patient, and healthy blood; they showed an indisposition to mix, as was observed in attempting transfusion, and by endeavoring to mix them in a bowl. We may say, then, that cholerine consists of a deficiency of bile, occasioned by spasm of the gall duct; that there is an interruption of the kylous process; and there is, therefore, an offending mass lodged in the intestines; and such is the economy of the parts, that vomiting and purging ensues; and nature sometimes thus throws off the disease, but oftener the patient would sink under it by direct exhaustion. In most cases, however, of cholerine, the evacuations are not so great as in com-

mon cholera morbus, but the chyle ceasing to be blended with the blood, the lungs can no longer vivify that fluid, and the patient passes to a state approaching asphyxia, and which has, therefore, been termed the state of asphyxia; and having fallen into this state, the danger is imminently great.

What indications have we to fulfil, admitting this view of the subject?

1. Allay nervous morbid excitement of the first passages; this is best done, we believe, by small doses of opium—camphor, ether, ammonia, aromatic teas, as ginger, cloves; sp. nitre, and laudanum, &c. have all been occasionally used with success. Where there is arterial excitement, bleed moderately.

2. Remove the morbid masses from the stomach and bowels. This, we think, is best done by calomel in moderate doses; sometimes the stomach is very irritable, or not easily quieted by the alkaline mixture; but generally, the powders already mentioned page 219, will answer better, we think, as the nitrat. of pot. is suited to rouse the kidneys from their torpor.

3. There being an absence or deficiency of bile, we aim at supplying its place by the alkaline solution. In this way we hope to stimulate the lacteals into operation, while the solution tends chemically to arrest the unnatural decomposition of the injesta.

4. We must endeavor to reinstate the secretory office of the lacteals, the exhalents of the stomach, the glandular office of the liver. When this does not follow the use of the purgative powders, and the alkaline solution, we have found a dose or two of castor oil, answer; and where it does not, or where there is much objection made to the oil, we have given 10 grs. of aloes, and 10 of jalap, with benefit.

Whatever may be thought of our theory, we recommend the remedies with confidence in the treatment of *cholerine*, since we have used them successfully in dozens of cases.

Of cholero-dysentery.—Epidemic cholera does not, under our observation, take on the state of *cholero-dysentery*, as often as of cholerine; but we have seen a good deal of it. We have not found reason to make any material alteration in the treatment of the former, from that suited to the latter. So far as we have observed, there is more arterial excitement, and probably some inflammation on the mucous surfaces, in cholero-dysentery, since there is a considerable amount of mucous discharged, mixed, or streaked with blood; there is also usually a great deal of straining, or tenesmus—we have observed less sickness of stomach, though there is always more or less nausea; there is often a good deal of greenish slime, sometimes mixed with a portion of the

whitish mass of cholera—we have found the urinary function less affected than in the cholerine.

We have treated the *cholero-dysentery* with satisfactory success, nearly in the same manner practised in *cholerine*. We have sometimes bled, not only because there is more arterial action, as expressed by the pulse, but the secretions, and straining pains, show a tendency to inflammation of the intestines; the peculiarity, in a pathological view of the subject, is, that there seems to be less spasm of the gall ducts, and of the lacteals, with more gastro-enteritis. The difference is not such, however, as to require any material difference in the treatment.

We have sometimes used pretty large doses, from 1 to 3 grs. of opium, with 1 gr. of ipecac. once in 6 or 12 hours, with much advantage. We have also used the infusion of beney leaves, with good effects. In one protracted case, the beney infusion, with tea spoonful doses of tinct. kino, once in two or three hours, succeeded well in arresting a distressing and obstinate purging and tenesmus.

Drinks in cholerine, and cholero-dysentery.—These should be weak teas, thin gruel, toast water, chicken water, beney infusion, strained panada, thin arrow root starch, sago, rice water, &c.

Food in cholerine and cholero-dysentery.—No solid food should be taken into the stomach on any account, till the tongue is clean, and all nausea and purging removed—the patient, as he regards his safety, must adhere to the drinks we have prescribed, and take no food whatever. So soon as the tongue indicates complete relief, stale bread, or dry toast, with a cup of tea for breakfast and supper, answers well—at dinner, chicken broth, a soft egg, custard, a very small morsel of boiled chicken, mutton chop, &c.

Of the treatment in the malignant form of Cholera.—We have used the term *malignant*, merely with a view of strongly expressing the difference in force of this stage of the disease, from the other forms of it; we do not think there is any actual malignancy, in the common understanding of the term; nor do we know any term which will clearly express the disease in this stage—asphyxia, and collapse will give some idea of the nature of this form, but do not truly express the condition actually present—asphyxia is a state of syncope, with suspended circulation, or, at least, of pulsation. Mr. John Hunter's case presents a true specimen of asphyxia—this gentleman was affected with disease of the heart, and was often known to lay the better part of an hour pulseless, and would then revive. In these cases we may suppose that, the heart and other vital organs, resumed their offices after having suspended them for a short time, because the blood is in a healthy state, and not disposed to coagulate so speedily as to endanger death. But in the last stage of cholera,

there is a constant tendency to coagulation of the blood, and this probably is the cause of death; we believe, however, that this tendency to coagulation is dependent upon some deterioration of the blood, in addition to coagulation the blood is decomposed, and that this proceeds principally, if not wholly, from the deficiency of *chylification*, which precedes the last stage.—Such being the case, it is obvious that, the term asphyxia does not convey our meaning, nor does the word collapse, signify what we understand by the malignant stage of epidemic cholera. We have not attempted the introduction of any new term, on the present occasion, but with this explanation we shall use the term malignant, to impress the last stage of cholera—it might be termed the cold stage.

We must refer our readers to what we have said of the pathology of *cholerine* and *cholero-dysentery*, for a description of the condition which in most, if not all cases, precedes the malignant stage. The bile being withheld, the lacteals do not perform their office efficiently, or perhaps sometimes not at all; the blood degenerates for want of its supply of chyle, or rather, perhaps, from a supply of imperfect chyle, while, at the same time, all the secretions, and the vivification of the blood in the lungs, is interrupted, or rendered imperfect, owing to a reduced state of the sensory; which reduced state of the sensory, we have elsewhere put down as the proximate cause of epidemic cholera.

We are not anxious, however, to establish any particular theory, but we wish to insist upon some facts, and these facts, in the present case, while they, in our opinion, support our theoretical views, present in themselves indications which seem to be too well founded, to be rejected till something more satisfactory can be obtained, on the pathology and treatment in the disease under review. These facts we shall now proceed to present.

The symptoms of the malignant form of cholera having taken place, there is a great tendency to retirement of the blood from the surface; it not only retires into the larger internal vessels, but it then becomes dark, separates into masses of different consistencies, and soon becomes coagulated; the arteries too, as well as the heart, becomes almost emptied of blood, by its lodging in the veins. These symptoms or phenomena are superadded, generally, at least, we think always, to the phenomena which constitute CHOLERINE. In a pure case of cholera, in its malignant stage, we have then the following state of things. An absence of bile; a vicious chyle, an interruption of the secretions of the stomach and intestines, a mass of irritating fluids in the intestines—this state of things not being relieved, and some exciting cause continuing to act, or now fol-

lowing in for the first time, the heart begins to fail in its functions, also the lungs, the kidneys, &c., and while this morbid train is getting up, which is sometimes very rapidly, the blood begins to coagulate—notwithstanding the bloodless state of the skin, and its reduced temperature, still the skin is morbidly sensible in most cases—from this state of things, we have the following indications:—

Indications to be had in view in the treatment of the malignant form of cholera.

1. To restore the proper temperature to the skin.
2. Prevent the coagulation of the blood.
3. Remove offending masses from the intestines.
4. Restore the secretions.

In our attempts at recovering the proper heat of the skin, we must be assiduous in the use of external heat—we believe experience is in favor of dry heat—rubifacients, sinapisms, external stimulants, should not be applied, we think, till the warmth is restored in some measure, when they will be useful in maintaining it.

We have observed that sinapisms have sometimes been much complained of, and under such circumstances may, perhaps, tend to debilitate persons already exhausted, to an alarming extent. Whatever may be found to be the true in this respect, on careful trial, we think, it will be conceded, that but little effect can be produced by sinapisms, where the skin is too low in its sensibility to feel their effects; but when a slight degree of circulation has been once got up in the skin, we think external irritants may prove eminently useful. Professor Jennings proposes a liniment, or thin ointment, made by saturating a portion of melted lard, with Cayenne pepper, to which is to be added a portion of ol. of pennyroyal. In hospital practice, bags af sand may be kept heated for applying to the extremities—in private practice, much good may be done, we have no doubt, by rubbing with heated flannel, turpentine, &c.; and particularly by the use of the alkoholic vapor bath, and we believe there is no apparatus more simple in its construction, or more effectual in the application, than the portable apparatus of professor Jennings.

We should like to see the use of the actual cautery, in desperate cases, along the spine—blisters, we fear, will come in too late; that is, they will not act soon enough. But we must not calculate too highly on our measures for exciting the skin, since it is to be feared that too often there is a train of morbid actions within, that will render abortive all medicaments externally applied; and hence it is, that we are told patients often fall again into the cold stage, after there has been an encouraging amount of warmth or reaction in the skin.

The next indication is to prevent the tendency to coagulation of the blood.—This is partially affected by the employment of the same means recommended in the *first indication.* Various methods have been proposed, but as we are constrained to be brief, we shall content ourselves with some notice of the methods which were employed at New York, to which we may add a few remarks. Dr. Hartshorn of Providence, reports that, for some time no regular plan could be adopted, each one of the physicians choosing to follow such a course as his views of the disease might suggest, but he says, "ultimately I had the satisfaction to see the treatment settle down upon more uniform and rational principles, varying somewhat in detail, yet having the same general intentions in view."

We are told that, "bleeding was generally disapproved of, except in vigorous subjects, and in the early stage of the disease." "At the Park hospital ether, laudanum, and brandy, are the principal stimuli—frictions of camphorated spirits being used to allay spasms." "At the "Bellevue hospital, they employ a mixture of ether, laudanum, peppermint, and alcohol. For drunkards the tinct. gentian, comp. is added—cramps allayed by electricity—and in some instances burning alcohol is sponged over the body." The Medical board have advised carbonate of ammonia in two and a half grain doses, camphor one and a half grain doses, every two hours. In some desperate cases phosphorus in ether, (three grains to three drachms,) is given, in doses of 40 drops. The treatment at Greenwich hospital has the preference in the estimation of doctor Hartshorn. The patients were lapped in blankets, and bags of hot sand placed around them, then the skin warmed by chaffing with flannel dipped in hot chalk—then brisk frictions with warm camphorated mercurial ointment, with the addition of Cayenne pepper. The mustard poultice now applied over the abdomen.—We should have but a poor opinion of the mercurial ointment, and we think the alcoholic bath, and sand bags well heated, will be found the best external remedies till the energies of the extreme vessels is somewhat revived, the Cayenne pepper and pennyroyal, &c., will then be useful.

Much reliance has been placed, in some instances, in Europe, in scruple doses of calomel and camphor—and under an apprehension of this being a spasmodic disease, opium has been freely used. At Hamburg, very minute doses of calomel, as grain doses, ½ of grain of opium and such like doses; the warm bath and frictions were often used, and it was observed that the warm bath sometimes seemed to aggravate the disease. We cannot enter so fully as might be necessary, into the various modes of treatment, we have seen that the fatality has been pretty much

the same in all places, and under all modes of treatment. But while we are compelled to make this humbling acknowledgment, we must express our gratitude to a kind Providence, that the disease is almost unattended with danger where proper precautionary measures are observed, and speedy application made of suitable remedies, in the state of *cholerine*, which always precedes the malignant form of the disease.

We believe that so far as we can see any clear indication, the prevention of the coagulation of the blood, is the most likely way to arrest the fatal tendency of this disease. Whether this being merely the effect of some concealed morbid action, will prevent the success which may be expected from the injection of saltish water, we can only decide by further observation; but as it is known that by adding a small portion of salt to the blood of animals at the shambles, and beating the mass with a stick, the blood will retain its florid color, and its fluidity; and, such being the fact, may we not hope that by prolonging the coagulating process, the internal derangement will be removed by the efforts of nature, or by the power of remedies. The effects which have been observed, we think justify, and, indeed, require, that these experiments be extended. Not having seen the disease in the state of malignancy, we shall not dwell on this part of our subject at present—we wish, however, to express our mistrust of stimulants; for the present, we do not know how to recommend, nor can we object to them; but since there is always more or less excitement of the vessels, on the inner coat of the stomach and bowels, we think, the utility of stimulants is still to be doubted.

We are to endeavor to remove offending masses from the intestines and stomach.—For this purpose we would give moderate doses of calomel, nitrate of potash, and camphor, aided by injections of cool salt water, spirits of turpentine, &c. In all cases where the patient is known to have overloaded the stomach, a full dose of ipecac. should be given. We should also administer aloes and castor oil, without hesitation,and where there is torpor,croton oil.

We are to restore the secretions—This indication, we think, will be best effected by the use of small doses of calomel, aloes, and nitrat. pot. But care must be taken not to carry these remedies too far,and thereby weaken the patient by rapid action on the bowels, or by depressing their energies, by too long a continuance of mild excitants. We have reason to believe, however, that notwithstanding the virulence of this disease, under certain circumstances, still it is of short duration, and we shall find generally that if we can recover the circulatory power, and remove sordes that the system will right itself, so that it is not often that we shall have to follow out the measures that have been proposed for cor-

recting the secretions as the treatment recommended under the other indications will answer in this last indication also.

It has been remarked by those who recommend free bloodletting in cholera, that if the blood can be brought to flow freely, the patient will always recover—this remark reminds us of an opinion which we should have expressed at an early stage of this essay, that we may with propriety try the effects of drawing blood with a view merely of lessening the labor of the heart, and making more room for the admission of salt water into the veins.

Our experience warrants the conclusion, that the present epidemic cholera is a very mild disease, but susceptible of being aggravated into a disease of great malignancy. In former ages more than the half of mankind died of small pox; in moderntimes it has been discovered that although in every person having a succeptibility to the disease, and in whom no means are employed for the removal of that susceptibility, that the susceptibility could be so modified by strict dieting, and preparation against the disease, that its mortality was almost obviated before the introduction of vaccination. Here, then, we have seen a most deadly malady rendered extremely mild; so with cholera, ample experiences convinces us, that although every one is under the influence of the poison in the air, and all feel its effects, more or less, it has nevertheless been ascertained, that the susceptibility to the disease can be so modified, that the disease itself is disarmed of its power, so far as to render it mild and safe. Surely this is a consoling view of the subject, and we feel fully assured that further observation will more and more confirm the opinion we have formed. Such being an epitomy of our views, we shall now proceed to give a very brief summary of our reflections.

1st. Epidemic Cholera is occasioned by a poison with which we are surrounded.

2d. This poison can be rendered wholly harmless, or rendered mild in its operations,by a suitable regimen,and other precautions.

3d. It always appears in the form of *cholerine* or *cholero-dysentery*, and in this stage it is more under the control of medicine than any disease we have ever treated. We believe, not one in several hundreds die of it, as matters have been; if the improvident and vicious would live as they ought, very few, indeed,would die of the disease.

We have already pointed out the precautionary measures,both public and private, see page 207. So much depending upon these precautions we shall repeat a few remarks, on this part of our subject. Let every one who can, conscienciously do it, endeavor to impress on the minds of the ignorant, that there is no other than a mild poison to fear, and that too much pains cannot be taken to render the disease mild and safe.

It should be remembered from day to day, and from hour to hour, that this poison renders every one in some degree an invalid, and that the impairment is in the digestive function. as we hope we have proved in this essay. We must therefore not only live carefully as regards *quality*, but we must live abstemiously—those who are aware of the vast advantages which was obtained by strict abstenance in the inoccnlation for small pox, can readily appreciate the necessity and advantage of pursuing a similar course in the present instance, since it is the digestive apparatus that is especially disturbed, by the cholera poison, for ourselves we can only say, that we have rendered our food plainer, and have reduced the quantity at least one half. Persons in reduced health or who have been living very low should improve their diet a little, taking a little light animal food.

Since the foregoing observations were put to press we have heard, from sources the most respectable, that cholera prevails in Harford County, on Gunpowder Falls, at Elkridge, and indeed almost every where around us. How vain then to strive to fly from the disease. Let it not be said it is less malignant there than in the city. Such subjects as die of it in town would die any where. We have reason to conclude, within the last few days, that most articles of difficult digestion should be wholly avoided, as unripe and green vegetables.

If the public would busy themselves in attending to this, and other precautions, and take an active part in enforcing its importance upon the ignorant, and the vicious, it would be far more praise-worthy in the eye of God and man, than indulging in an idle curiosity in hunting after *cholera*. One might suppose it was one of the most welcome strangers that ever appeared among us. Lafayette is beggared by the admiration with which people of all classes hail this stranger! announce his arrival, ferret him out! do not let him slay the people in the dark!—true we cannot see him, but he comes in *majesty!* all bow, all hail, all admire, and what is it? an epidemic, in no degree to be compared with many other diseases that have visited mankind since the world was peopled. Shall we not grow wiser by experience? we have seen our neighbors, in other cities, surrender their business, their houses, to their common sense, to the name of a disease.

Let us use all precaution, adhere to our respective duties, public and private—let the countrymen continue their visits, our merchants remain in their counting houses, and be frugal and moderate, and we shall profit by the errors of our neighbours, and shall be enabled presently to congratulate each other, with the old saying:

Montes parturiunt, et nascitur rediculus mus.

mThe mountain was in labor, and behold there came forth a ouse.

WASHINGTON MEDICAL COLLEGE OF BALTIMORE.

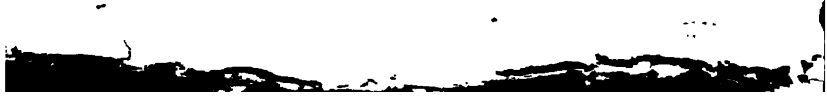
LECTURES will commence in this Institution, on the last Monday in October, and continue four months.

HORATIO G. JAMESON, *Prof. of Surgery and Surgical Anatomy.*
SAML. K. JENNINGS, *Prof. of Materia Medica and Therapeutics.*
WM. W. HANDY, *Prof. of Obstetrics and the Diseases of Women and Children.*
SAMUEL ANNAN, *Prof. of Anatomy and Physiology.*
JAS. B. ROGERS, *Prof. of Chemistry.*

THOS. E. BOND, M. D. will deliver a course of lectures, during the ensuing term, on the THEORY AND PRACTICE OF MEDICINE.

TABLE OF CONTENTS FOR NO. IX.

	Page
Observations on Cholera Morbus,	5
Anderson on case of Axillary Aneurism,	35
Jameson's case of wound of Ulnar Artery,	40
Case of Pneumonia, with Dropsy,	44
Heming on Uterine Hemorrhage,	48
Case of Strangulated Hernia,	54
Wolfley on Empyema,	56
Wound of the external Iliac Vein,	61
Diffenbach's Experiments on Cholera Patients,	67
Case of Tumor on the Tongue,	77
Case of Fungus Tumor,	78
Remarks on Lactation,	87
Lectures on Burns and Scalds,	91
Observations on Fever,	100
Cazenave on Diseases of the Skin,	124
Jameson on Inflammation,	156
Madras Medical Board on Cholera,	166
An Epitome on Cholera,	193
Of the character of Cholera,	197
Is non-migratory,	198
Nature of the disease,	200
Of the cause of,	204
Prevention of a public nature,	207
of a public nature, but less general,	209
Prevention of a personal kind,	211
Of the symptoms of the disease,	212
Of Cholerine,	213
Of Cholero-dysentery,	ib.
Of the malignant form,	214
Case of,	ib.
Dissection of a case,	216
Summary of signs which serve to distinguish epidemic cholera,	217
Treatment of cholerine,	218
Cholera Morbus in 1806,	219
Pathology of Cholerine,	220
Of Cholero-dysentery,	222
Drinks in cholera,	223
Food,	ib.
Of the treatment in the malignant form,	ib.
Indications to be had in view,	225
To prevent coagulation,	226
Remove offending masses,	227
To restore the secretions,	ib.
Washington Medical College,	230



THE

MARYLAND

MEDICAL RECORDER,

Devoted to Medical Science in general.

CONDUCTED BY

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Quæramus optima, nec protinus se offerentibus gaudeamus; adhibeatur judicium inventis, dispositio probatis. *Quintilian.*

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ADVERTISEMENT.

We owe our patrons an apology for the delay of the present number of this journal, for the period of a few weeks; but while we regret the occurrence of the fact, and the necessity for explanation, we trust our patrons will excuse the delay, when we inform them that it has been occasioned by the existence of the late epidemic, during all that period that should have been devoted to the labor of getting up the journal for November.

It will be admitted, we trust, that no physician engaged in business, could devote the time necessary for compiling a periodical, during an epidemic of so serious a character as cholera; but if such be the fact in ordinary, it will readily be seen, how much more we were likely to be prevented from fulfilling our editorial engagement, since we acted as city health counsellor, and had also the cholera hospitals, as consulting physician, under our charge. In addition, however, to the difficulties just pointed out, we wish to inform our readers that, while it seemed desirable to collect and publish all the information upon cholera, as early as possible, it was evident that we would put our patrons earlier in possession of such information by delaying the present number a little later, than by reserving it for the next.

Our plan for sending out vaccine matter, has also been interrupted by the presence of cholera. We cannot, therefore, for the present, send out virus sufficiently fresh; but we shall hold ourselves bound to furnish our patrons with infection forthwith, upon being required so to do. Indeed, further reflection has led us to believe, that the best plan will be to supply our patrons, at such times as they may want it. Any one, then, of our patrons who may desire to have a supply, has only to pay up arrearages, and pay the postage of his letters, and his call shall be immediately satisfied. It is known to a number of our patrons, that such supplies are promptly furnished, since we have already forwarded recent infection to several of our correspondents since November.

Delinquents are again respectfully reminded, that we will be much obliged by their remitting whatever may be due. To those who have received this work from its commencement, without paying any thing for it, and there are several such, we can only say, they have paid us a poor compliment; and if they do not pay up, we shall at least have the opportunity of holding their names in contempt—such as do not can neither be our friends, nor the friends of science—those who have a sufficient excuse will oblige us by offering it.

TABLE OF CONTENTS.

Robertson on the laws which regulate the intervals of conception, ... 233
Excision of the elbow joint, ... 244
Lewins on infantile remittents, ... 245
Allen on acute rheumatism, ... 254
Allen on tumors of the head in new born infants, . 257
Warfield on lacerated wound of arm . . . 259
Case of umbilical presentation, . . . 260
Case of luxation of arm, ... 260
Watson on plea of insanity in cases of homicide, . 261
Bradford umbilical hemorrhage, ... 274
Jameson's case of polypus, ... 280
On Epidemic cholera, ... 283
Carrere's report on cholera, ... 283
Mackenzie's report on cholera, ... 343
Jameson's historical sketch on cholera, . . . 371
Correspondence between the boards of health of Savannah and Baltimore, ... 385
Carrere's summary of treatment of cholera, at hospital No. 2, ... 386
Number of deaths and other particulars relating to patients at hospital No. 1, ... 389
Deaths and other particulars relating to cholera patients at hospital No. 2, ... 391
List of names at hospital No. 2, to show that the cholera was widely spread over the city, ... 393
List of names, &c. at No. 1, to show that cholera prevailed generally, ... 394
Introductory lecture on cholera, delivered at Washington Medical College, by H. G. Jameson, M. D. . . 395
Warner on cholera, ... 407
Appendix treating on cholera, ... 431
Bibliographical notice—Letters on the cholera asphyxia, as it appeared in the city of New York, . 461

THE

MARYLAND

MEDICAL RECORDER.

VOL. 3. NOVEMBER, 1832. NO. 2.

ORIGINAL COMMUNICATIONS—AND SELECTIONS.

ART. I. *An attempt to demonstrate the Law which regulates the intervals of Conception in the human female.* By JOHN ROBERTON, Esq., one of the Surgeons to the Manchester Lying-in Hospital and Dispensary for the Diseases of Women and Children. [*Taken from the Edinburg Medical and Surgical Journal, for* 1832.]

IT is well known that all the larger graminivorous quadrupeds of this country have a single period of ardour annually, and that they bring forth their young in the spring. From such a law mankind would seem to be wholly exempted, since about an equal number of children is born in each of the months of the year. The final cause of this characteristic difference is sufficiently obvious. Man, by the use of his rational faculties, is able to provide nourishment and shelter for his new-born offspring in every season, but the inferior animals (I allude particularly to those that pair) are not thus circumstanced. Hence their periods of conception and parturition are so determined by instinct, that their young are brought forth at *that season* of the year when the food designed for them by nature is beginning to grow, and will be plentiful by the time of weaning. (1)

Note 1.—We are aware that this law prevails very generally, and seems in most cases to be an inherent part of the constitution of some animals, since many of our domesticated quadrupeds are not in any degree changed, by the new habits imposed on them in other respects, by their domestication: scanty supplies of food do not seem to lessen the venereal propensity; however lean, if in health, they discover the ardor peculiar to their kind in the proper season. The common dunghill fowl affords an exception to this general law; and the fact has been noticed by Goldsmith in his *Animated Nature*, that these fowls change in their desires to propagate their species as they are more or less supplied with wholesome food; and hence the great value of the domestic hen who, may be made, by good feeding, &c., to lay eggs throughout the whole year.

In all our *graminivora* which bring forth once annually, the season for conception is determined by the length of uterine gestation in each species, the *end* of the law being to secure the birth of the offspring in the spring. The *immediate* cause of this unvarying arrangement is extremely obscure. What, for example, can be more inexplicable than such facts as these? The mare and the ass, which go with young nearly twelve months, foal in the spring; and in order that a new progeny may be ready by the next vernal period, they receive the male almost immediately,—the ass on the seventh and the mare on the ninth day after parturition. The cow, whose pregnancy extends to nine months only, does not conceive till three months after calving, that is, at midsummer. The sheep and the goat, which carry their young about five months, do not become in heat till the end of autumn, that is, about seven months after parturition. In the last place I may instance the hare; she goes with young only for about thirty days, and receives the male in the beginning of February, which is eleven months after parturition. Many other facts of a similar kind might be adduced; but these are sufficient to prove that the fecundity of our graminivorous quadrupeds is regulated by a law, which, for want of a better name, we call that of instinct, the *end* of which, as has just been remarked, is obvious; but the *immediate* causes, differing, as they doubtless do, in the different species enumerated, lie beyond the reach of our knowledge*.

The fecundity of mankind is then obviously independent of that periodical instinct which regulates the fecundity of quadrupeds. But here an important, and, as far as I know, a *novel* question presents itself, namely, *that since the duration of human pregnancy is only nine months, the same as in the cow and the deer, how does it happen that women do not conceive and bring forth annually as well as they?* It is clear that there must be some law in operation which prevents this result, since it is well known that the ordinary interval between successive births in the same mothers, when the children live to be suckled, is *about two years*. This interval, be it a little more or less, coupled with the fact of human pregnancy continuing only nine months, shows that the fecundity of women is *by some means* restrained, or rather regulated, with something of the same general certainty that happens in brutes from instinct.

A slight consideration of the circumstances of the offspring of the human kind, compared with those of the young of brutes, leads *a priori* to the inference that there *ought to be* longer in-

* It is the popular notion that the period of the year at which animals breed is determined by the heat of the weather. But this is clearly at variance with the above facts.

tervals between successive births in women than in brute females. Were human births annual, one child would be still dependent on the maternal aliment, and in all other respects helpless, when another devolved upon her care; and in a few years there would be an accumulation of feeble progeny sufficient to exhaust the constitution, as well as the moral energies and resources, of the most vigorous and affectionate mother. Moreover, the bodily peculiarities of a child are such as show that it will naturally be longer dependent on the milk of the mother than the young of the lower animals. At the expiration of two years, a child, in the power of self-preservation, and as possessing the ordinary qualities of an animal, scarcely equals the young of any of our domestic quadrupeds at the age of two or three weeks. The condition of the mouth is one point in which the difference is the most remarkable. Most, if not all, quadrupeds come into the world having the incisor teeth fairly protruded through the gums; and in the third or fourth month (in the calf for example,) the milk teeth are completed,—an event which may be considered as indicating the natural period of separation from the dam. In the child, the natural period of weaning is, by the same indication, at about the end of twenty-four months. It is true that very few of our women could suckle so long; nor is it absolutely necessary, with so many artificial substitutes for the maternal milk, that weaning should be deferred till this late period; yet, as we shall afterwards find, children *among the rude tribes of our species* are suckled quite up to *this* the natural weaning-time. And though I am far from intending to represent a barbarian mother's management of her child as a model for imitation, I am persuaded that the inirritable brute-like constitution of a barbarian woman is fitter in general to represent the type of the *nutrix hominum*, as nature made her, than that of the excitable female of modern civilization.

If then it be true, notwithstanding the absence of periodicity in the generative function in women, and the fact of utero-gestation in her continuing for nine months only, that the intervals between the births of successive children which live to be weaned is about twenty-four months, what is *the cause* which thus regulates the pregnancy of conception?—a cause, whatever it may be, which obviously takes the place of instinct in brutes; and though operating with less precision than instinct, yet operates with general uniformity.

There is an opinion entertained by the vulgar in this, and perhaps in all other countries, whether barbarous or civilized, that women do not ordinarily conceive during lactation. It is thought that so long as the secretion of milk continues in the breasts, the uterus is not in a state fit for conception. This is,

strictly speaking, the opinion of the vulgar alone. Scarcely one of our writers on physiology or midwifery has even alluded to it; and those who have deigned to notice this opinion, represent it as being, at least in a great measure, an unfounded prejudice.—Haller speaks of it thus: "lactation does not prevent pregnancy, although it is universally believed to have that effect."* And Dr. Blundell assures us that suckling is no certain preventative of pregnancy. According to this opinion of these eminent physiologists, woman is placed by nature in a very different and much more unfavorable situation, as regards the production of offspring, than quadrupeds. Her term of gestation is the same as that of the middle-sized *graminivora*, namely, nine months, and her progeny are far more delicate and feeble, and require more, and much longer continued care than that of brutes; nevertheless it would seem, that, being confessedly destitute of that instinctive periodicity in the exercise of the generative function which attaches to brutes, she is also destitute of all periodicity whatever, as regards the parturient function; and is under the influence of no law, in this matter, except that originally promulgated,—"multiply and replenish the earth."

If such be the case with woman, then is she the most hardly dealt with of all animals. Let us suppose that every matron were to bring forth a child once every year,—and if she is under the influence of no restraining law this may occur,—it is clear that her maternal duties would be extremely onerous; in fact the task would be far too great for any except the wealthy, a very small fraction of mankind, who alone are able to procure helps both in suckling and tending; a supplemental aid, too, to be purchased only, it ought to be remarked, by the sacrifice in general of the infants of those who are degraded enough to hire out their breasts for money. That instances of annual parturition do occasionally happen is well known; and when they occur among the poor, they are almost invariably productive of great infantile mortality, as well as of much exhaustion and premature senility in the mother. (2)

* Elementa Physiol. T. vii. Pars ii. p. 143.

Note 2.—The opinion expressed above is no doubt correct when applied, either to females in the higher circles of cities, and of the poor in cities, or in any situation where from too much drudgery or too scanty diet their constitutions are debilitated; but by no means applies to a large portion of the women of this country; there are thousands of women, particularly on our farms, who labor pretty hard, but who live well, enjoying an abundance of the most substantial and wholesome food, and bear children annually, without any consciousness that they are not as well off as those who breed biennially. This throws no obstacle in the way of the opinion of our author, but shows that much of the evil arising from too frequent gestration, is not more, if as much, owing to the interruption of any particular law of

That there is something more in the vulgar belief respecting the influence of lactation in retarding conception than physiologists have allowed, had long appeared to me probable. Following the advice of Hunter, not to rest satisfied with *thinking*, but to *try*, and having ample opportunities, I was induced to bring the popular opinion to the test of inquiry. With this view certain questions were put, as convenience offered, to a considerable number, namely, 160, of the more intelligent of those married women who resort, in a state of pregnancy, to the board of our hospital, for the purpose of being registered as home-patients. As I was careful to make the inquiries myself in every instance, and with proper deliberation, I have no doubt whatever of the general accuracy of the results. I would, however, advise others who may have similar opportunities to investigate the subject for themselves.

Respecting these 160 women, I may, in the first place, state the following facts. Their average age was 30½ years; their aggregate number of births 686, that is, 4¼ for each woman; the number of children which lived to be weaned 512, or 3¼ for each; and the average age at which they weaned their children 15⅓ months.

Of these women I found that 81 had become pregnant once or oftener during lactation, and that the remainder, 79, had never conceived under the same circumstances.

Of these 81 women who had become pregnant during suckling, I found that 27, who had produced 101 children, had conceived only 38 times during lactation; that 42, who had always become pregnant while suckling, did not, on the average, conceive till they had suckled for 19⅓ months nearly; and that 22, (the remainder of the 81 women,) had been in the habit of conceiving during lactation, and soon after parturition.

The average age for weaning their children was different in the two classes of women,—in those, namely, who had not conceived during suckling, and those who had conceived once or oftener while so engaged. For the 79 women composing the former class, it was 14¼ months; and for the 81 women of the latter class, it was 15⅔ months.*

nature, as to the manner in which breeding women live, as respect the supplies of food, bodily exercise, and mental operations. Most of the women to whom we allude in the above remarks, enjoy a great degree of mental quietude—setting out in life with no expectation but that of the usual labors of their mothers, and no higher aim than that of a gradual increase of property, in which they are seldom disappointed, they are freed almost entirely from anxiety, and therefore enjoy an evenness of mind and temper highly conducive to good health.

* Of the above 160 women, *ninety-nine* had never menstruated during

It further appeared as a general fact, that in healthy women, when the child was still-born, or when it died soon after birth, another birth took place within the ensuing twelve months; and that, speaking generally also, women under forty years of age, and in health, conceived in from *one to three months* after weaning, whether that event happened at an early or at a comparatively late period after parturition.

The *first* corollary which I would draw from the foregoing facts is, that in seven out of eight women who suckle for as long a period as the working classes in this country are in the habit of doing, there will elapse *an interval of fifteen months* from parturition to the commencement of the subsequent pregnancy.

Second, That in a majority of instances, when suckling is prolonged to even nineteen or twenty months, pregnancy does not take place till after weaning.

Third, That lactation has an influence on the generative function; that up to a late period in suckling, probably in this country about fifteen months, conception does not in general occur; and that hence we are warranted in regarding the secretion of milk as the CAUSE which regulates the periods of conception in mankind, as instinct operates to the same end in graminivorous quadrupeds, and probably in all other animals.

It will not, I apprehend, be denied, that in every instance in which conception occurs at an early period of lactation, the infant is placed thereby in a situation more or less disadvantageous; and that upon the whole such rapid fecundity is equally unpropitious to both the mother and her offspring. This being admitted, it comes to be a question, (since nature evidently intends that a considerable time *should* elapse between succeeding

suckling. Of the remainder, 61, the facts may be placed in a tabular form.

One woman who had suckled 3 children menstruated only in one instance of lactation.

Two women	do.	7 children each	do.	each only in one	do.
Four do.	do.	6 do.	each do.	each only in one	do.

One woman was in the habit of menstruating after suckling 4 months.

Four women were	do.	6	do.
Two	do.	7	do.
Two	do.	8	do.
Two	do.	9	do.
Two	do.	10	do.
One	do.	11	do.
Seven	do.	12	do.
Two	do.	14	do.

Thirty-one menstruated regularly during lactation.

I ought not to omit remarking, that of those women who had usually conceived while yielding suck, I found that the majority did not menstruate; that in fact the appearance of the *catamenia* during lactation did not appear to have any influence in disposing to conception.

births,) whether, in those exceptions to the law which we occasionally witness, the blame rests with nature, or with circumstances which are not natural but artificial. It appears to me that an attentive consideration of the circumstances of the infant, particularly with reference to the organs of mastication, as I before remarked, furnishes the strongest presumptive evidence that it was intended the child should receive the maternal milk for a considerably longer time than could happen, were the mother to bring forth once every year. It follows, therefore, that so long as the infant is, through its physical condition, dependent on the milk of the mother, (which we have seen is the case until it has nearly completed the deciduous teeth,) so long ought the mother, in fulfilment of the natural law, to be in a condition to yield this aliment. If it should be said that reason, which brutes do not possess, enables the mother, by the use of artificial food, to dispense with the breast at any age whenever the occurrence of pregnancy may render it necessary, I would reply, that on the same plea suckling might be dispensed with altogether, since it is certain that, under favorable circumstances, infants may be reared by the hand alone. The point at issue, therefore, is, not *what may be done* by enlightened management, but only what nature's intentions are in the matter; and these, so far as I can trace them, seem to be that the mother shall suckle her child till it attains the age of about twenty-four months.

I am very far from thinking, or intending to assert, that it is desirable generally for mothers, in the present state of society, to prolong the period of suckling to more than half this duration.—Few, comparatively, in towns, and in the middle and upper classes of society, are able to continue it longer than nine or ten months without experiencing more or less exhaustion; and those, under such circumstances, who persevere, at all hazards, for eight or ten months longer, often entail on themselves the most alarming and obstinate debility. Besides, there are many who are never able to bear the drain of lactation at all. But what do these facts amount to? Do they impugn the natural law of lactation? Clearly not. The original laws of the human constitution exist, and ever will continue, however much the artificial habits of a portion of mankind may set them at defiance.—To mention, by way of example, a well-known case. It is unquestionably a law of our constitution, that we should feel gratified and refreshed by the odour of the rose, and by other mild scents, yet no fact is better authenticated, than that the ladies of modern Rome are not thus affected by (what to us are) agreeable odours; but, on the contrary, that they are thrown into convulsive and other distressing nervous affections by them. "This influence," says Dr. Clark, "is chiefly felt by the females, though

the males are not insensible to it."* Here we have an instance of over-refinement producing a morbid sensibility of the sensorium, which converts a simple and pure source of natural enjoyment into a source of suffering and disgust, thereby reversing or rather annulling a general benificent law of the Creator.

These remarks lead me to inquire, (and the inquiry shall be a brief one,) respecting the manner in which the ruder tribes of our species, whose nervous system, and organic functions generally, are far less under the influence of disturbing causes than ours, fulfil the natural law of lactation. It is well known that among every people women are treated with greater lenity and kindness by the other sex, in proportion to the advancement they have made in civilization. Hence among barbarians women constitute what may be denominated the *laboring class*. Women cultivate the fields, they sow, they reap, they fell and convey home the wood, they carry the baggage in all the movements of the tribe; and, in fine, are compelled often, on the scantiest fare, to lead an incessantly active and toilsome life. In such a state of society, all the feeble and delicate, (particularly if they are females which are little regarded,) are sure to perish in infancy.—Only the robust are ever likely to live to adult age, and become mothers. Owing to this cause, as well as their hardy manner of life, the women of savages greatly excel the women of civilized countries, in the endurance of toil, and in the possession of inirritable brute-like health.

To whatever causes we are to ascribe the frequency of procured abortion and infanticide among barbarian women, there can be no doubt that natural affection, after a child has been deliberately taken to the bosom and care of the mother, is as strong in them as in us. This is confirmed by abundant testimony. Among the various peculiarities to be observed in their manner of managing their children, perhaps (to us) the most remarkable is the great length of time they retain them at the breast,—a practice they are enabled to follow among some races of people, by the custom of avoiding co-habitation during the period of lactation; and among others, where co-habitation is not interrupted by the long intervals which, it would appear, occur between succeeding births. In selecting a few facts to exemplify this trait of rude manners—I mean the long duration of suckling—I shall confine myself to such races as are confessedly in a low state of civilization, and of whose manners we possess creditable accounts.

To begin with the Abipones, a people with whose domestic history we have been made familiar, Dobrizhoffer tells us that it

* Clark on climates, p. 156.

was the practice of their women to suckle a child three years.*— The Keebets, another South American tribe, suckled for the same length of time.† Of the Mexicans, we learn that it was the uniform practice among them to suckle their children for *several* years.‡ The same circumstance is remarked regarding several of the tribes of the Canadian Indians.§ And Dr. Winterbottom has stated that the negroes of Sierra Leone suckle till the children are two years old, or till they can bring the mother a calabash of water.‖ In all these instances the mothers are not allowed to cohabit with their husbands till after weaning. In the examples which follow, this temporary kind of divorce did not obtain.

I will mention first the North American Indians. Among those visited by the party of James, in their journey to the Rocky Mountains, the mother had often two successive infants at the breast at the same time, "the eldest of which might be three years old.¶ Of the Potawatomi, a more northerly race of Indians, Keating reports that they continue to suckle their children for a great length of time; in some instances for three, four, or more years, if no subsequent pregnancy occur. In one case, he remarks, a mother was observed giving the breast to a child twelve years of age. Meta, an intelligent chief, informed the party, that he had never heard of a woman's milk wholly failing while she was giving suck.** Among the Dacotas the same intelligent writer observes, "children are suckled for a long time, from two to five years, generally till a new pregnancy interrupts the secretion of milk."†† Concerning the Cree Indians, a still more northerly race, Captain Franklin informs us, that their women marry very young, and have a practice of suckling their children for several years,—a custom which, together with the fatigue and famine to which they are often exposed, renders them unprolific.‡‡ In addition to these authorities, one of our best writers on Indian manners has said, that the Chipewyan women (the Chipewyans are a vast family of westerly Indian tribes,) "suckle their children till they have another child."§§

Of the Esquimaux and the Greenlanders, we possess abundant testimony to the same effect. Captain Parry has said that the

* Dobrizhoffer, Vol. ii. p. 97.
† Southey's Brazil, Vol. iii. p. 402.
‡ Herrera and Gomera, quoted by Robertson.
§ Charlevoix, Nouv. France, T. iii. p. 288.
‖ Winterbottom, Vol. i. p. 149.
¶ Expedition to the Rocky Mountains, Vol. i. p. 149.
** Expedition to the source of St. Peter's River, Vol. i. p. 131.
†† Ibid. Vol. i. p. 435.
‡‡ Franklin's First Journey, 4to. p. 60.
§§ M'Kenzie's Travels in North America, p. 122.

former suckle their children to the age of three years, but that occasionally a child of five years is to be seen at the breast.—"The time of weaning," he remarks, "must, in some instances, depend on the mother's again becoming pregnant, and if this succeeds quickly, must, as Crantz relates of the Greenlanders, go hard with one of the infants. Nature, however, seems to be kind to them in this respect; for we did not observe *one instance*, nor hear of *any*, in which a woman was put to this inconvenience."* Crantz and Egede made a similar statement concerning the women of Greenland.† Lesseps says that the Kamtschadale women sometimes suckle for four or five years.‡ Pallas, that the Ostiaks, a rude race, suckle for as long.§ Krashennicoff that the Keroki, another race of Northern Asia, suckle till three years and upwards.‖ And according to Scheffer the Laplanders suckle for two, three, or four years.¶

It is well known that Asiatics in general suckle their children longer than Europeans, although we have no reason to think that lactation when long continued is not occasionally interrupted in them by the occurrence of pregnancy, as it is in this country. Morier informs us that the Persians suckle male children two years and two months, and females two years complete.** The Tartars of the Crimea suckle from two to three years, and account us barbarians for weaning so early.†† In this matter the Koran prescribes a law for its followers. It directs that the mother shall suckle her child for two years: This, Sale tells us, is copied from the Jewish custom, in proof of which he refers to the Mishna and Gemara, and to Maimonides.‡‡ Respecting the Turkish ladies of Aleppo, Dr. Russel states that they seldom suckle less than two and sometimes three and four years; and that one reason they allege is their being less liable to conception while yielding suck. In this expectation, he adds, they are often disappointed.§§

With respect to every race in the East and in the South, testimony to the same purport might be adduced. "The mothers of Ceylon," says Dr. John Davy, "suckle for the long period of

* Parry's Second Voyage, 4to, p. 527, see also Captain Lyon's Journal, pages 120 and 149.

† Egede's Description of Greenland, p. 146, and Crantz's Greenland, Vol. i. 149.

‡ Lesseps' Travels in Kamtschatka, Vol. i. p. 134.

§ Pallas, Voyages, &c. Tom iv. p. 72.

‖ Krashennicoff's Kamtschatka, p. 233.

¶ Scheffer's Lapland, folio, p. 123.

** Morier's Second Journey, 4to, p. 107.

†† Holderness, p. 18.

‡‡ Koran, Chap. 2, and Sale's Preliminary Dissertation, p. 179.

§§ Russel's Aleppo, Vol. ii. p. 304.

four or five years."* And I have the authority of the Reverend W. Ellis, privately and obligingly furnished me, to state that in the South Seas, generally, children are kept at the breast much longer than in Europe; that it seldom happens that they are weaned under eighteen months or two years; that conception often takes place during suckling; and that he has witnessed two successive children suckled at the same time.

On a careful review of the foregoing facts, I do not see that we can avoid arriving at the following conclusions; namely, that in a simpler and less refined condition of society, women possess greater physical ability for bearing the drain of lactation, than is the case with those of our own country; and that, as they suckle for a longer period, they are thereby somewhat longer exempted from subsequent conception; in other words, the intervals between successive pregnancies, (unless when abortion and infanticide has been practised,) are greater than in Europe, being probably seldom less than thirty months.

In concluding these observations, I cannot help remarking, that it is a great mistake to confound, as is too commonly done, civilization and over refinement, as if they were identical. The noblest improvement of society, which the hopes of the philanthropist anticipate, is a condition totally different from the spurious civilization of the present age. Over-refinement is the vice which stands in the opposite extreme to barbarism. In a state of barbarism the body is generally vigorous, but the mind is dormant. In one of over-refinement, the mind and body are alike vitiated. Instead of the body lending a healthful tone to the mind, the body and the mind are reciprocally the slave of each other. Whatever deranges the body even in slight degrees disturbs the mind; and the morbidly sensitive mind is not less frequently deranging the body. Society, it is to be hoped, is only in its progress to a more natural and more exalted state. Even now we may witness an approach to this, in the pastoral, and in some other of the more thinly peopled districts of our island, where religious and moral knowledge has been ingrafted on simple habits of life. Before, however, such a state can become general, the moral and intellectual perceptions of mankind must be purified and quickened by a course of discipline, of which it is probable many centuries will not see the completion. When such a period shall arrive, and it is at least harmless to anticipate it, then only may our women reasonably hope to find, that those original laws of the human constitution, which respect lactation and the regulation of fecundity, shall no longer prove sources of exhaustion and distress; but that they operate to secure the well-being equally of the mother and her offspring.

* Natural History of Ceylon, p. 288.

ART. II. *Case of Excision of the Elbow-Joint.* By DAVID KERR, Esq. Surgeon, Aberdeen. Communicated by Mr. SYME. [*Taken from the Edinburg Medical and Surgical Journal, for January*, 1832.]

ALEXANDER GRAY, aged 16, was recommended to me in the beginning of May 1830, with disease of the left elbow-joint of ten months' standing. The swelling extended a considerable way both above and below the joint. Suppuration had taken place over the inner condyle of the humerus, and in various places below the joint. The ulcers had degenerated into fistulous openings; and through these a probe could be passed to the lower end of the humerus, which was in a carious state. There was a constant gnawing pain in the joint, shooting down towards the wrist, greatly aggravated by pressure or the slightest motion. His general health was much impaired; his pulse 120 and feeble; he had night perspirations; and, in short, was far advanced in hectic fever. Such were the leading symptoms of the disease when he was placed under my care. To give a detail of its history and treatment from the commencement were superfluous. It may be sufficient to state, that he ascribed the origin of the disease to an injury which he received on the joint when on a voyage to Jamaica, and that it gradually continued to gain ground, notwithstanding a variety of treatment by different practitioners, till at length his health became so much affected, that the hospital surgeon, under whose care then was, deemed it necessary to recommend amputation,—an expedient, however, to which he refused to submit, and accordingly left the hospital.

It was soon after this that he applied to me. To improve his general health he was sent to the country, where he continued to gain strength for several weeks: but after the beginning of June his strength again began to decline, and by the middle of July had sunk so far, that it was evidently necessary to have recourse to an operation, for there was no reason to suppose that he could long bear up under a disease so irritative, and of so untractable a nature. Excision of the joint was therefore resolved on, and, as soon as the nature of the operation and its probable consequences were explained to him, he readily gave his consent. The operation was accordingly performed on the 23d July, in the following manner.

The position of the patient was that recommended by Moreau, so that the diseased arm hung over the edge of the table, presenting its posterior and outer surface. The brachial artery being compressed by an assistant, an incision was made poste-

rior, but as near to the course of the ulnar nerve as could be ascertained from the diseased state of the parts, commencing about two inches above, and terminating immediately below the joint. A similar incision, parallel to the first, was made on the outer side of the arm; and a transverse section, which divided the tendon of the triceps immediately above its attachment to the olecranon, connected the inferior extremities of the two longitudinal incisions. The flap, consisting of the integuments, diseased cellular tissue, and lower extremity of the triceps, was dissected from the surface of the bone. The extent of disease in the humerus being ascertained, the soft parts adhering to its anterior surfaces were separated from it by the scalpel, which was then passed between the bone and flexor muscles, and retained in that situation till the bone was divided by the saw over the handle of the scalpel, which served as a protection to the soft parts beneath. The removal of the lower portion of the humerus was completed by raising and detaching it from its remaining connections. The articulating surfaces of the bones of the forearm being thus completely exposed, they were found denuded of their cartilage, exhibiting the true carious appearance, and in every respect as much diseased as the humerus. It being therefore necessary to remove the upper extremities of the radius and ulna, the longitudinal incisions were extended about two inches below the joint, and the flap separated, so as to lay them bare. The whole of the ulna above the coronoid process was then removed by the saw, and the head of the radius by the forceps. The diseased parts being thus removed, the wound was sponged out, and as no vessel required the application of a ligature, the flaps were laid down and secured to each other by stitches.

The patient was placed in bed, with his arm supported on a pillow, and simple dressings applied. By the end of three weeks the hectic symptoms completely subsided, and from that time his health improved rapidly. The soft parts being much diseased, the wound healed up slowly. Several of the old sinuses continued to discharge a little for months, and one of them at this date affords a little serous exudation; but from the appearance which it has lately assumed, there is not the least doubt that, in the course of a few weeks, it will be completely cicatrized. The thickening about the joint has entirely subsided, and he retains an arm, which, though necessarily shorter and less perfect than the other, bears no comparison in point of utility to a stump. He can make very considerable exertion with it in lifting weights, can raise it to his head by the power of its own muscles, and

employ it for many useful purposes, and, what is still more gratifying, it is daily increasing in strength and utility. (3)

Aberdeen, 20th August, 1831.

ART. III. *Pathological and Practical observations on Infantile Remittent Fever.* By ROBERT LEWINS, M. D. Fellow of the Royal College of Physicians of Edinburg, &c. [*Taken from the Edinburg Medical and Surgical Journal, for January,* 1832.]

IN the study as well as in the practice of medicine and surgery, it has been too common to devote time and attention exclusively to diseases and operations which by their nature astonish, or by their effects appal us; whilst others, in reality, more important, from their being of every day occurrence, have been very much overlooked, or altogether neglected.

Infantile remittent fever is one of this description, to which I would direct the attention of my professional brethren. This is a disease of very frequent occurrence, although not always recognized as a distinct malady. The symptoms by which it is characterized were noticed by Hoffman, Lieutaud, and Sauvages, and each of them has given it a different name. Its true nature, however, was not until of late understood, as the whole train of symptoms observable in its course was attributed to the existence of worms in the bowels; and the disease was by the profession, as it still is by the vulgar, denominated a worm fever. Worms, it is true, frequently produce similar symptoms; but in many cases which come under the care of the physician, no worms are found to exist. When, therefore, the disease we are about to consider is found to be co-existent with worms, these, occasionally present, are to be considered as being only accidental; or, at most, as an exciting cause of a peculiar train of morbid phenomena.

While infantile remittent fever was still considered as the effects of worms alone, Dr. George Armstrong of London, published an accurate account of it under the name of the Hectic Fever of Teething, which he observed is attended by all the symptoms of worms, except their actual appearance.

I have stated that the presence of worms is by no means necessary to constitute the disease, and it may be recorded with

Note 3.—This case presents in a strong light, the advanced state of modern surgery; and whether considered in relation to this important fact, or as a precedent to be adopted in similar cases, it is highly honorable to the author directly, and indirectly to the medical profession generally, for we do not hesitate to place the scientific surgeon in the medical ranks.

equal truth, that the circumstance of dentition is not a constant attendant, as the same series and order of symptoms are observed to take place in children not under the influence of dentition.

In the history of this disease, as in many others, we have an example of the pernicious influence of a too hasty nomenclature, and of the impropriety of naming a disease from any one of its alleged causes.

So long as this disease was known by no other names than those of the worm or teething fever, the attention of the physician was necessarily directed to the expulsion of the worms, or the liberation of the teeth; and, when in spite of his best endeavors, neither could be made to appear, he must often have been made sensible of the error of his diagnosis, and of the insufficiency of his means.

A worm fever, where no worms were found to have existed, or a teething fever, where no teeth were about to appear, or where the process of dentition was already completed, must have often puzzled and perplexed medical practitioners, so long as these addle names were retained.

To Dr. Butter, I believe, the profession is indebted for the suggestion of a more appropriate name, which, by dissolving the association of a certain train of morbid symptoms that constitute the disease, and the supposed causes, has directed physicians to a more perfect knowledge of its nature and treatment.

The accuracy of Dr. Butter's history of this disease, and the truth of his observations, so far as they went, have been confirmed by those who have prosecuted the inquiry. But, strange as it may appear, there are, even now, medical practitioners, by no means deficient in the knowledge of their profession, incapable of recognizing it as a distinct fever.

The name given to the disease by Dr. Butter has been approved of, and retained by succeeding authors; and additional light has been thrown upon its nature by the observations of Underwood, Pemberton, Burns, and Mackintosh.

In the following observations, I shall employ the term infantile remittent fever, although I think a more appropriate one might easily be found.

The fever of which I treat has properly been divided into two kinds; the acute and the chronic.

To the acute I direct my attention more particularly upon the present occasion.

It generally happens, that, for some time before an attack of remittent fever manifests itself, a derangement of health is observed; the patient frequently changes color, loses his appetite, he becomes dull, fretful, and drowsy; his breath is offensive, and he is often observed to pick his nose. Sometimes a slight cough

takes place, which is greatly increased during the progress of the disease, and is attended with hurried or laborious respiration. If the patient can speak, he complains of pain in the head or belly; the latter is generally larger than usual; the bowels are for the most part costive; sometimes, however, a diarrhœa takes place. In the course of the day there are several accessions of fever, which become more violent towards evening. During the night the patient is hot and restless, often starting and moaning in his sleep.

After a longer or shorter period a more violent paroxysm of fever takes place, which is preceded by a cold fit, and often by vomiting. The pulse becomes very rapid, beating from 150 to 170 or upwards in a minute. The heat of the body is greatly increased, and the patient is very restless; while the headach and pain in the belly become more urgent, and the sleep more disturbed.

The bowels, which from the first had been costive, now perhaps become obstinately constipated,—and in some cases convulsions occur. Several exacerbations are sometimes observed in the course of the day; but always towards night an aggravation of symptoms is perceptible.

In the remissions the patient is often so well as to be able to direct his attention to surrounding objects, but the pulse does not often fall below 100.

Through the whole course of the disease, there is not the least desire for food, nor is the patient in general harassed with thirst. If forced to swallow aliment, it is generally rejected by vomiting; the digestive organs appear totally unfit to perform their office, as the ingesta not rejected by vomiting pass off by the intestines, after they have been acted upon by purgatives, without having undergone the usual change.

The stools are generally of a green or dark color, of a slimy consistence, and very offensive smell. Worms are sometimes voided.

The tongue is often clean, occasionally dry and very red, sometimes, however, it is furred, but not covered with the thick dark colored or black coating observable in fevers of the typhoid type.

As the disease advances, the patient often becomes incapable of articulating, and in some cases complete aphonia has been observed; the loss of speech sometimes continues for several days after the violence of the fever is subdued. Paralysis of one or other of the extremities is occasionally observable, and I have seen the little sufferer unable to call into action the muscles of one leg or arm, while those of the opposite side remained unaffected. I have never known the paralytic affection permanent.

During the continuance of the fever the surface of the body is dry and parched, but sometimes a clammy moisture may be observed on the hands and neck.

The abdomen is always tumid and tense, the heat there and about the loins very great, while, at the same time, the feet and legs are colder than natural.

Just before the exacerbations take place, at whatever time they occur, the attentive observer may commonly remark great coldness in the feet and legs, while the face is perhaps flushed, and the belly and loins excessively hot.

The urinary secretion is very variable, generally scanty and thick; at one time of the day becoming cloudy when cold, but depositing no sediment; at other times it becomes white, with a chalky precipitate. Dr. Armstrong observes that it has often a peculiar smell like that of the cat. In some cases the urine is copiously secreted and natural in appearance. Doctor Butter has seen it of a deep orange tinge.

Nature does not seem to have fixed any limit to the duration of this fever. Some cases terminate favorably in a few days, others linger for many weeks; but in general the duration of the acute disease does not exceed a fortnight. A crisis is seldom observed in the infantile remittent fever, but a moisture more or less copious, attended with relaxation of the skin, has appeared at its termination. A diarrhœa has sometimes appeared to be critical.

The urine, according to doctor Butter, at the termination of the disease, deposits a copious sediment, and the body assumes a straw color. But the fever oftener gradually remits, the exacerbations becoming more mild and less frequent. And when we find the abdomen soft, the tumefaction subsiding, the stools returning to their natural state, and the patient enjoying sounder sleep, we may expect a solution of the disease, especially if the heat of the body be diminished, and more equally diffused, if the patient become sensible, and the appetite return. A greater degree of fretfulness is sometimes a forerunner of returning health.

The disease does not often terminate fatally, and recovery sometimes takes place after the exhausted state of the patient, or the formidable nature of the symptoms had precluded all hope.

When the disease does terminate fatally, the patient is either snatched off suddenly by convulsions, or gradually sinks worn out by the febrile excitement; or under such circumstances as show that the mucous membrane of the intestines has suffered; or coma, dilated pupil, and strabismus and subsultus afford to us painful proofs of fatal effusion in the brain. The infantile re-

mittent is certainly a fever arising from a topical affection, and it is not propagated by infection.

All physicians whose attention has been particularly directed to this disease are of opinion that it has its proximate cause, a disordered state of the digestive organs.

Whatever tends to derange the chylopoietic viscera is a predisposing cause of infantile remittent fever; but I believe the actual kind or degree of gastric or intestinal derangement that constitutes the proximate cause yet remains to be proved. We do know, however, that vitiated secretion exists, and local affections of an inflammatory nature in the parts concerned, as well as in others more remote, particularly in the brain, supervene and sometimes prove fatal.

The contents of the chest occasionally suffer from actual inflammatory affections, although it oftener happens that the cough is merely sympathetic. I have frequently found a blister applied to the chest, and the patient subjected to unnecessary torture in a case of this disease, where a purgative only was required.

Infantile remittent fever is sometimes mistaken for idiophatic hydrocephalus, and has been confounded with typhus, enteritis, hepatitis, and pneumonia.

To hydrocephalus it certainly has often a very striking resemblance, and it is frequently difficult to distinguish the one from the other. Indeed there is reason to suppose that the physician has often taken credit to himself for the cure of hydrocephalus, when the disease was no other than the one which now occupies our attention.

Notwithstanding the occasional very striking resemblance between the two diseases, there are circumstances which will enable the experienced practitioner to distinguish them. I may here remark, however, that, to accomplish this object, too much stress has been laid upon the appearance of the eyes, the very obstinate constipation of the bowels, and the appearance of the stools, which cannot collectively, and certainly not separately, be depended upon as certain marks of hydrocephalus. Dilated pupil, or even strabismus, and obstinate torpidity of the bowels, which have been considered so truly characteristic of hydrocephalus, are occasionally met with in infantile remittent, whilst the appearance of the stools is nearly the same as is observed in the former disease.

The signs by which we may be enabled to distinguish these diseases may be known, I conceive, from the following observations. The infantile remittent is not necessarily attended with vomiting,—a symptom always present in the first stage of hydrocephalus; in it, too, vomiting is either produced or increased by the patient being placed in an erect position. The coldness of

the extremities, the regular exacerbations, the state of the patient during the remissions, the excessive heat of the abdomen and pain upon pressure, characterize remittent fever. In both diseases the sleep is much disturbed, but the piteous and frequently loud screaming appears to be peculiar to hydrocephalus, while a low muttering only attends the remittent fever of infants.

The history of the case, also, and the appearance of the gums, will greatly assist us in our diagnosis in many cases, teething being a frequent exciting cause of this fever. We ought also to pay particular attention to the effects of purgatives, which frequently afford more decided relief in infantile remittents than in hydrocephalus.

The fever of which we treat is often mistaken for typhus.—This, however, ought not to be a common occurrence. The early history of this disease, the appearance of the tongue, the more complete remissions, and the evident connection, in the first instance, with gastric and abdominal derangement, will enable the physician of even limited experience easily to distinguish the infantile remittent from typhus. It does not require much skill to discriminate between this disease and pneumonia, enteritis, or hepatitis, with each of which I have known it confounded. A very slight attention to the time in which the lungs, bowels, or liver have become affected, will readily enable any one to perceive that the inflammatory action occasionally at work in these organs is an effect and not a cause, and that it is almost always of the sub-acute kind. (4)

The indications of cure may be reduced to four heads.

1*st*, To remove the remote cause of the disease.

2*d*, To restore the healthy action of the chylopoietic viscera.

3*d*, To obviate the effects produced by the disease on important organs, as the brain, the lungs, the bowels, &c.

Lastly, To restore the exhaustion of the *vis vitæ*.

It is a wise indication of cure in every disease to remove the remote cause when that is in our power; and this is more especially necessary in the diseases of children, as, from the delicacy of the infantile frame, constitutional derangement is more readily the effect of slight causes. A cake of milk, for example, in the stomach, will sometimes produce convulsions.

It is the duty of the physician in every case of this disease to examine the state of the mouth, and when he finds marks of lo-

Note 4.—We are impressed with the belief that little difficulty will attend the separation of this fever from typhus in this country—according to our observation children suffer but seldom from typhus fever. We are aware that cholera infantum, when it becomes protracted, takes on febrile action, resembling in the condition of extreme debility, typhus; but genuine acute typhus fever seldom affects infants or young children.

cal irritation there, to scarify the gums freely. (5.) The relief which often immediately follows will show how much the fever had been connected with the state of the gums. Any other remote cause, if in our power, ought also to be removed; but we must not expect that the disease shall instantly cease. We have other indications to fulfil; the remote cause, however, being removed, our other remedies will be administered with more effect.

Attention ought generally to be next directed to restoring the healthy action of the chylopoietic viscera; but this depends upon the stage of the disease, and upon the effects it may have produced.

If the brain be affected, to *it* our attention must immediately be directed, in the manner which will be noticed in speaking of the effects of the disease, which may be denominated secondary.

In the present state of our knowledge, the mere abdominal functional derangement is best remedied by the judicious administration of purgative medicines, which must be given so as to effect a complete evacuation of the bowels. It often happens, that to accomplish this is by no means easy; and it is truly astonishing to observe the large and repeated doses of active purgatives which have been administered without moving the belly, or at most producing very scanty and unnatural stools. When that is found to be the case, we must not persist in the administration of the more active kind, otherwise, instead of mitigating the severity of the disease, we shall increase its violence. Under these circumstances, a spasmodic affection of the intestines exists, and frequently a degree of inflammation upon their inner surface, both of which will be increased by drastic purgatives.—But it is absolutely necessary to have the bowels evacuated, moderate doses of phosphate of soda, castor-oil, rhubarb, and magnesia, are the most appropriate medicines. In this state of the disease, when there is an urgent necessity for evacuating the bowels, great advantage will be derived from fomenting the abdomen with warm water, or a decoction of chamomile flowers and poppy heads. The fomentations ought to be continued for half an hour, and repeated after a longer or shorter interval, as the circumstances of the case require. After each fomentation, some place much confidence in the application of emollient and

Note 5.—We admit that cases do present themselves where much irritation attends dentition, and that worms have sometimes been the cause of febrile diseases, but we have long thought that both sources of irritation have been much overrated. Anthelmintics have been given in thousands of instances where no worms existed; and a vast deal of evil has been attributed to dentition which should have been ascribed to gastric and intestinal irritation. So sensible have we been of this fact that we have but seldom given ourselves much trouble about worms or teething.

anodyne liniments to the abdomen by friction. The *Tinctura saponis cum Opio*, *Tinctura Saponis*, and *Oleum Camphoratum*, are most employed. Besides the administration of purgatives, injections will in many cases be found very useful.

Perhaps a combination of opium, or some other antispasmodic, with purgative medicine, may be advantageously prescribed.

If the continuation of the disease depend upon derangement of function and a loaded state of the bowels alone, it generally happens, that after their complete evacuation the febrile exacerbation abate, and the other morbid phenomena gradually disappear; the appetite returns,—the patient becomes capable of directing his attention to objects around,—and now enjoys undisturbed repose. But we have not always the satisfaction of witnessing such a speedy and desirable termination of the disease. If the fever have been very violent, or improperly treated at the beginning, effectual relief is not obtained by the administration or complete operation of purgatives; effects having been produced which may be termed secondary, to obviate which the attention of the physicians must now be directed.

The parts which are most apt to be affected in the way referred to are the mucous membrane of the intestines, that of the lungs and the brain, all of which are very apt, during the continuance of the infantile remittent fever, to suffer from the effects of inflammatory action, the proper management of which constitutes the principal difficulty in a great proportion of cases of this disease. The propriety of general blood-letting has been questioned, as there is seldom considered any necessity for depletion in its early stages, or until the sufferer has become exhausted.—The soundness of this doctrine I am disposed to question; and when it is remembered how decidedly efficacious general blood-letting, judiciously practised, is known to be, by late experience, in many diseases in which it was supposed to be inadmissible, I am induced to think that it may occasionally be resorted to with advantage in this fever, where the excitement in the whole system is so great, and the inflammatory diathesis in a degree so conspicuous.

It is unnecessary to detail minutely the local remedies necessary under the circumstances referred to. Leeches, fomentations, rubefacients, and blisters, are applied with benefit to the abdomen; and the same means, with the substitution of cold applications instead of fomentations, are the remedies by which we attempt to check the progress of the inflammatory action in the brain or its investing membranes.

It has already been hinted that general blood-letting would probably be a valuable remedy in violent cases of infantile re-

mittent; (6) and there can be no doubt that all other antiphlogistic means, short of venesection, are necessary, when it does not yield readily to the administration of purgatives.

The debility which is produced by the continuance of the disease, or by the treatment, will be best obviated by nourishing, but not stimulating, diet. Great caution is always necessary in administering wine,—and the physician ought never to forget that the patient's strength will generally be restored without its aid.

ART. IV. *Cases illustrating a peculiar form of Acute Rheumatism.* By R. N. ALLEN, M. D, Calvert County, Md.

CASE 1.—This case occurred in a young negro woman, belonging to Mr. A. W., near Coop Town, Harford County, Md. The attack took place February 14th, 1829; and commenced with chill, succeeded by synochous fever, with excruciating pain in the joints of the upper and lower extremities, attended with tumefaction of the affected joints—pulse rapid, but compressible—tongue coated with a yellow fur—skin dry and hot, &c.

Mr. Ware came for me in the night of the 15th of February, stating the pain to be so violent, that if not speedily relieved, he

Note 6.—Our experience divested, we think, from prejudice, leads us to believe, that, in fevers generally, far more benefit will attend the seasonable abstraction of blood by the lancet, than the use of cups or leeches: to say nothing of the delay, difficulty, fright, and in poor families, the expense attendant upon local bleeding, we think that there is much in favor of the old and more simple practice. Mistaking gastric and intestinal irritation or congestion, as the cause of fever, is one of the unsound opinions of modern times—it is to mistake the effect for the cause, and has been the cause of an amount of trouble, loss of time, &c., which is almost entirely avoided by the employment of a safe and more simple and efficient practice, we mean by general bleeding graduated to the condition present.

We venture to assert from ample experience, that the lancet can be used with the most perfect safety, and the most satisfactory success in the treatment of infantile diseases of a febrile character. With respect to the question, at what period of infantile remittent fever may we employ bloodletting? We wish to say, that, we have employed it most frequently in protracted cases, and always with the most marked advantage—the use of the remedy will of course require prudence and some share of skill, but while there are paroxysms of fever we may generally bleed, during the exacerbation. Believing with doctor Lewins, that debility of the stomach and intestines has much to do with the diseases of children, we mostly commence with remedies directed to those parts; finding difficulty, we use the lancet, and have thus often verified the fact, that bleeding is sometimes highly salutary in the protracted state of the disease.

thought it must prove fatal. On my arrival I ordered

Opium gr. ij.
Calomel gr. xv.
Pulv. Antimon. gr. v.

and applied a large blister below each knee.

February 16th—morning. The powder given last night relaxed the skin, gave great relief from pain, and produced one or two copious discharges from the bowels.—An infusion of senna with sulphate of magnesia ordered, to be taken in divided doses through the day, till the bowels are freely evacuated—a blister to be applied to each arm to-night, and a full dose of Dover's powder at the same time given.

17th. Still further relief from both fever and pain.—Bowels to be again opened to-day by a moderate dose of senna and epsom salts—10 grs. of Dover's powder every six hours, with a wine glassful of infusion of serpentaria in the middle of each interval.

19th. The Dover's powder, &c., have kept up a constant moisture of skin, and controlled the pain, which was before intolerable.—Same medicines continued, but at longer intervals—aperients when indicated by the state of the bowels.

22d. Decidedly convalescent—pain gone—tongue clean—pulse soft and of moderate frequency.—Nothing was now advised but a light diet and occasional aperients, with the use of flannel clothing for the remainder of the winter and through the ensuing spring.

A nutricious diet of soups, &c., was allowed and enjoined, throughout the disease.

Case 2.—Negro C., a young woman belonging to O. Scott, Esq., then residing near Belair, Harford County, Md.—This was a case very similar to the above; but the pain, though occupying, as in the other case, the joints of both the upper and lower extremities, was not so violent—the tumefaction was however greater.

April 6th, 1829—morning.

Pulv. Antimon. gr. v.
Calomel gr. xij.

immediately, to be followed by repeated doses of castor oil, till free catharsis occurs. A blister between the shoulders, and one to each leg—Dover's powder at night.

April 7th. Great relief has been obtained. An aperient ordered to-day, with Dover's powder at night.

8th. Nearly well.

Remarks. Acute rheumatism connected with general fever, is a disease by no means of frequent occurrence in those parts of

the country where I have practised. The cases above detailed, and especially the first, seemed to me to be cases of general fever, in which the affection of the joints, though by far the most distressing portion of the malady, was merely incidental. In such cases, though the rheumatic affections must require very important modifications of treatment; yet the grade of the concomitant fever is a subject of the first importance, and should always be cautiously regarded.—In neither of the above cases was bloodletting judged to be admissible; and their prompt and very favorable termination under the treatment used, at least shewed that such a measure was by no means necessary.—I am disposed to think it is too common to regard rheumatic fevers as of a nature essentially sthenic or inflammatory, and as almost necessarily requiring the employment of the lancet, to greater or less extent. I am convinced that this is an erroneous view; and that I have seen rheumatic inflammation connected with fever of almost every grade. I regard the fever, aggravated as it must always be, by the rheumatic pain and irritation, as the principal source of danger, where any is to be apprehended. It is important to bear in mind, what was always known to the profession, but is remarked with peculiar clearness and emphasis by doctor Southwood Smith; that in the local affections accompanying fever there is not only inflammation, but *something else*—"namely, a peculiar affection of the nervous system, which gives to the febrile inflammation a peculiar character." It is probably this circumstance which has given rise to such a diversity of sentiment in regard to the employment of the lancet, bark, and other remedies, in rheumatic inflammation; I confess however that I should judge the use of bark to be very rarely advisable, and still more seldom strictly necessary.

In the only fatal case of rheumatism I ever witnessed, death seemed to have been the result of febrile exhaustion, accelerated by the rheumatic irritation and pain. No metastasis could be discovered, nor was there any sign of internal inflammation.—The patient, a child about 5 or 6 years old, had been bled and taken some cathartic medicine in the beginning of the disease; but was then neglected till about the 8th day, and died on the 9th. The pain continued extremely violent till a very short time before death.

In regard to blisters as remedies in rheumatism, it is my opinion that where the pain is severe, they should always be applied immediatcly after the first depletory measures; only observing that where a number are required, they should be applied, not all at once, but in succession. They have always seemed to me, to afford very great and manifest relief from pain, which has a very important agency in keeping up the irritation, both consti-

tutional and local. Even in the most inflammatory cases, I have only waited to perform bloodletting, and then to procure the operation of a large dose of calomel and antimonial powder, with or without opium, according to the violence of pain, and followed by salts and senna or castor oil. After the action of these remedies, I have resorted immediately to blistering; the delay of which to the later periods of disease, I regarded as one of the most important errors, in the treatment of nearly all the phlegmasiæ.

In the onset of rheumatic affections, I commonly give a large dose of opium, with calomel and antimonial powder; premising venesection, where it is judged necessary. This combination, besides preparing for the action of cathartic medicines, will very generally afford great relief from pain; at the same time that it relaxes the skin, and equalizes the circulation. In inflammatory cases, such a combination, repeated if necessary in smaller doses, will very much diminish the necessity for bloodletting; and thus obviate the dangers of metastasis or exhaustion, which attend the protracted use of that remedy.

ART. V. *Cases of Tumors on the Head, occurring in New-born Infants.* By R. N. ALLEN, M. D., Calvert County, Md.

Case 1.—This occurred in one of my own children, born January 16th, 1831. Soon after birth a tumor was discovered about in the situation of the posterior fontenelle. This was of about the size of a common cup-plate; its contents were manifestly fluid; and around the margin of the tumor there was a distinct *rising* of the bone, giving to the fingers the sensation of the bone terminating at this point. Under these circumstances, I judged the tumor to contain water, and that the bony structure was wanting underneath—in a word, I thought it a case of congenital hydrocephalus. On consulting my then neighbour doctor Robert H. Archer, he was of opinion that the tumor consisted of blood, and not of water; that there was not in fact any deficiency of the bone under it; and advised that it should be immediately laid open with a lancet. This was accordingly done, and about a wine glassful of perfectly fluid blood of a dark venous color, was discharged. For some days after, the rising of the bone around the surface which had been occupied by the tumor could be distinctly traced.

A linen compress moistened with lead-water was kept on the part for several days; and though some collection of fluid after-

wards took place, this was re-absorbed, and no further puncture became necessary. An erythematous *blush* continued to appear at intervals, in the situation of the tumor, for about a year after the evacuation of the fluid.

Doctor Archer observed to me on this occasion, that he had before seen several cases of similar tumors on the heads of new-born infants, and on opening them, had uniformly found them to consist of blood, extravasated between the integuments and cranium.

Case 2.—During the present year I have seen a case very similar to the above; and upon opening the tumor, a considerable quantity of blood was discharged, perfectly fluid as in the former case. The fluid however was in this case reproduced to such extent as to require several punctures, before the final subsidence of the tumor.

Remarks.—The above affection, though I presume it cannot be of very rare occurrence, I have never seen noticed, either by any systematic writer, or in the journals of the day. I have therefore thought that a notice of it in this journal might save some practitioner the uneasiness which I myself experienced on first witnessing it, from want of knowledge as to its nature.

I think it probable that the extravasation of blood giving rise to these tumors, may arise from the rupture of vessels on the head of the child during labor; and such I recollect to have been the opinion of doctor Archer. I find it much more difficult however to account for the bony prominences around the margin of the tumor, which gave to my fingers the sensation of a terminating edge. It may possibly arise either from thickening of the periosteum, in consequence of inflammation caused by the pressure of the fluid; or from an actual depression of the bone situated underneath the tumor, forming an angle at the junction of the depressed portion with the surrounding bone.—I think the latter the more likely cause of this phenomenon; but however this may be, it is well calculated to deceive, by conveying the idea of an absolute deficiency of bone beneath the tumor. This species of tumor may I think, be distinguished from hydrocephalus, by its occupying generally a smaller surface; by its commonly existing in situations not immediately over the fontenelles; and by the absence of constitutional disorders.

ART. VI. *Case of Lacerated Wound of the Arm.* By Doctor GUSTAVUS WARFIELD, of Anne Arundel County, Md.

ON the evening of the 2d of March, 1829, I was requested to see A. Turner, a middle sized healthy man about 50, who had been injured by an explosion on the rail road. I saw him about 11 o'clock at night, which was about 12 hours after the accident. The right arm from the elbow down, together with the hand, was literally destroyed; owing to the lacerated state of the vessels, there had been very little hemorrhage, I amputated. All the front part of the left arm, together with the palm of the hand broken up, presented a scortched, bloody, and spongy surface, with several deep lacerations; the radial artery I ascertained was uninjured, and concluded to try and save it. I was aware that tetanus was to be dreaded: if he escaped that, gangrene might ensue; even in sloughing, the arteries might give way—and render amputation at last necessary, and perhaps under very unfavorable circumstances. On the other hand it was all important to save the limb, if possible. I ordered a poultice of lie thickened with wheat flour, to be renewed once in 24 hours, each time of renewing the poultice, a mixture of olive oil and opium in the proportion of ℥ij. ol. oliv., and grs. x opii mix.—was freely applied over the whole injured surface. This plan was continued until suppuration commenced, together with sloughing, which was so extensive as to leave portions of the radius and ulna bare; the tendons in the palm of the hand were denuded, and several pieces of tendon were so much lacerated as to be removed. About the middle of the arm the laceration and sloughing extended so far round as to leave not more than one inch of sound skin. As soon as the sloughing of the destroyed surface was over, the denuded surface, from the elbow to the tips of the fingers, was dressed with lint saturated with the oil and opium, and covered with a plaster of digestive ointment, occasionally renewed. The face and eyes were very much injured. He was completely blind for the time. The face was burnt and blackened with powder, and a considerable quantity of grit was imbedded in the surface. A poultice of bread and milk was applied and renewed three times in twenty-four hours; a kindly superficial suppuration threw off grit, and restored the face to the former appearance. After discontinuing the poultice, the eyes being still very much inflamed and painful, I directed them to be constantly covered with soft linen moistened with a weak solution of acetate of lead. They were perfectly restored. The general state of the system was attended to during the treatment; and on the 23d April his case was dis-

missed cured. I should not have given this case, but doctor J. M. Gibson, of Baltimore, to whom I related it, requested me to communicate it, thinking it might be of service. I have simply given the case, the treatment and result—and leave you to decide whether its publication, will be of any professional advantage.

The hand and arm were so completely restored as to enable him to feed and dress himself and ride on horse back without difficulty. He was afterwards employed in several contracts for bridge building for the rail road company.

Art. VII. *A case of Umbilical Presentation.*

This case came under the care of doctor Gustavus Warfield. On the rupture of the membranes, he discovered a protrusion of the umbilical cord. The parts were well dilated; he passed his hand up, returning the cord, and ascertained that the head and feet were bent back on the spine, so as to present the whole abdomen to the lower part of the uterus. The hand was placed on the lower part of the child's breast, and in the absence of pain, pressure sufficient to move the spine to the fundus, was used. The ensuing pain threw the head forward, and forced down the feet, which were laid hold of, and delivery effected without difficulty.

Art. VIII. *A Case of Luxated Humerus.*

In the summer of 1815, doctor Gustavus Warfield, of Anne Arundel County, was requested to take under his care J. V., it was a case of long standing luxation of the humerus, forward under the pectoral muscle: it had been under treatment previous to his being called on. On seeing the patient he found him very much emaciated, great irritibility of the nervous system, with slight hectic symptoms. The tumefaction was considerable, the surface presenting gangrenous vesicles. A blister as advised by doctor Physick, was directed to cover the whole tumified surface, to be dressed with the yeast poultice, which was a favorite remedy fifty years ago, with the late doctor Charles Alexander Warfield, in gangrene, the patient to take bark and wine with nourishing diet. The gangrenous appearance subsided, the part around the head of the bow imposthumated, and opened at the

lower edge of the pectoral muscle. Through the sinus formed by the contents of the imposthem, the probe could come completely in contact with the head of the humerus. On the 23d of July, which was about four months from the time of the luxation, doctor W. reduced it. He found it necessary to bleed freely—No inflammation followed, and the patient in a few days was walking about and attending to his ordinary avocations. This case affords a hint of the advantage of attempting reduction, however unfavorable appearances may be.

ART. IX. *Three Medico-legal Cases of Homicide, in which Insanity was pleaded in Exculpation.* By ALEXANDER WATSON, Esq. F. R. C. S. E. [*Taken from the Edinburg Medical and Surgical Journal, for July* 1832.]

IN each of the three following cases the charges of murder were clearly proved against the pannels without any difficulty. In the medical part of the evidence respecting the murders, there was no circumstance of particular interest. But regarding the other important question, the sanity or insanity of the prisoners, and their responsibility as moral agents, there was certainly considerable difficulty, and room both for doubt and discussion. The particulars of these cases are shortly as follow:—

CASE 1.—George Waters, a ship-carpenter, about 30 years of age, who lived in Leith, was tried before the High Court of Justiciary here on the 9th November 1831, for the murder of his son, a boy of 7 years of age, by means of a common table-fork.

For some time before the murder, Waters had become unsteady at his work, and had acquired habits of dissipation, which proved equally injurious to himself and his family. In consequence of his frequent state of intoxication, and his outrageous conduct on such occasions, he was often excluded from his own house by his wife, who apprehended danger to herself or her children.

His conduct had several times given distinct proofs of mental derangement for short periods. In one of these he was taken to the Police Office in Leith, where he seemed to those who saw him to be laboring under *delirium tremens.*

On the night previous to the murder, Waters had been much intoxicated, and was refused admission into his house. In the morning he returned and was admitted; he got some food from his wife, and then went out and got some whiskey.

About half past 12 o'clock on the day of the murder, he found his son and some playmates amusing themselves near his own house with a small rusty fork which belonged to the boy.—Waters at this place took hold of the boy by the hand, and told him he wished him to accompany him to Edinburgh to visit his aunt who lived there. The boy was at first unwilling, but afterwards consented to go, by the hope of reward, which was held out to him.

The father, leading his son by the hand, now proceeded towards Edinburgh by the Bonnington road, and was observed to take the fork from the boy and put it into his pocket. He proceeded towards Stockbridge, but before arriving there, he departed from the road at Saxe Cobourg place, turned to the north, and crossed the Water of Leith to the fatal field, which is situated at a short distance to the east from the old mansion house and garden of Inverleith.

Waters was seen by several persons, both immediately before and after the murder, all of whom, as well as those who saw him on the evening of the same day, thought him to be in a state of derangement from his wild, frantic appearance, his incoherent talk, and insane gesticulation. After he committed the murder he was seen hovering about the place where the body lay. Two persons, who, afterwards found the body of the boy, observed him alternately look into the ditch where it was lying—move his body backwards and forwards—and place his hands across his breast; from which they concluded that he was "a poor man in a state of derangement."

In the afternoon and evening of the same day he was seen at Craigleith and Cramond speaking and acting in an incoherent manner. In particular, he brandished the fork in his hand—took off part of his clothes on the high road—trampled upon them, and said he was an honor to his country, being Sir William Wallace, and waited there for his title, which was to come from Heaven.

Early next morning he was found in a stair at Stockbridge, speaking incoherently and so loud that he alarmed the inhabitants. Some of these persons had heard of the murder of the boy, and the description of Waters, which this person in the stair seemed to answer. They accordingly accused him of the deed, which he at once acknowledged, and said that he was the unfortunate man who did it. At the Police Office, to which he was taken, he narrated in a circumstantial manner how the murder had been committed.

In the forenoon of the same day on which he was taken to the Police Office, being the day after the murder, he was visited by doctor Spens and myself. He had then become more com-

posed; and, in conversation with him, he spoke with great regret of the death of his son, and said he could not conceive how he could have been guilty of such a crime. He seemed to be a man rather of weak intellect, but showed no indication of insanity, or of any mental hallucination.

The body of the unfortunate boy was examined by Mr. Brown and myself on the day after his death. We found his death to have been occasioned by several small wounds which penetrated the heart. These wounds had caused a fatal effusion of blood into the pericardium. There were other punctured wounds which had penetrated the abdomen, by which blood was also effused into this cavity.

By the evidence adduced in Court, the death of this boy, David Waters, by the hand of his father, was clearly established.—The other important question, regarding the insanity of this unfortunate man at the time of the homicide, was also considered by the Court and Jury to have been sufficiently proved. He was accordingly acquitted from the charge of murder, and ordered to be confined for life.

By the testimony of the witnesses then brought forward, Waters had been a man of peculiar and weak mind. He had suffered several domestic calamities; and had been at times in a state of mental derangement. All those who had seen him on the morning of the murder, said that he had a fierce and excited look; his conduct, both immediately before and after the murder, was that of an insane person, and in this light had attracted the particular attention of the persons who saw him.

In the slaughter of his own unoffending son, to whom he was much attached, we have a presumptive proof of insanity. His conduct, too, on the evening of the same, and morning of the following day, affords strong concurring evidence of mental derangement. His conduct at Craigleith, at Cramond, at Stockbridge, and his confession of the deed, are all very conclusive of this. The confession of the crime, I conceive, may be considered as an evidence of insanity of considerable weight. Not that every man who confesses a murder is to be considered insane; but, by this, taken along with other circumstances, as when the individual does nothing to conceal the deed, but, on the contrary talks of it, and attempts to give reasons for the propriety of his conduct, we have a strong indication, in its natural undisguised simplicity, of the deranged condition of the intellect. From the perversion of his judgment, and the delusion occasioned by the unsoundness of his mind, the maniac is insensible of his crime. This sort of confession has generally been made by individuals who have committed homicide from insanity. In short it is so universal in such cases, that some very distinguish-

ed medical jurists* consider this confession alone to be a sufficient test of insanity.

In many cases we have also negative evidence of this state of mind, from the absence of motive and premeditation of design; as well as, from the perpetration of the crime having been upon one, towards whom the assassin had not, and from natural ties could not, be conceived to have formed so great a malice, if he had been of sound mind. No doubt, therefore, could be entertained in the case of Waters of his having been in a state of mental derangement, when he deprived his son of life.

George Waters, it is true, was proved to have been previously a man of weak intellect. Yet his capacity was sufficient to have enabled him to work like other men at the trade of a carpenter, by which he was able to earn a livelihood for himself and his family. But he became unsteady at his employment, irregular in his habits, and addicted to the immoderate use of ardent spirits. Hence another very important question arises in his case, namely, whether his deranged state of mind was entirely owing to spontaneous natural disease, or was occasioned by the use of ardent spirits operating on a peculiarly formed mind? This is a view of the case which was not pressed by the public prosecutor. But there is much reason to conclude that his occasional fits of madness were caused by *intoxication* affecting a mind predisposed to insanity. For the *delirium* always subsided in a few days; and upon the night previous to the murder he had been much intoxicated, and had even got some spirits on that same morning.

Besides the use of spirits being in many cases an exciting cause of insanity, it is no uncommon thing for some unfortunate individuals to continue in a state of insanity or delirium, for a day or two after a fit of intoxication. Of this I have seen several instances, and there are many on record.

If his immoderate indulgence in spirits was really the cause of Waters's insanity, how far should this plea have exempted him from punishment? The immoderate use of spirits causes a temporary madness in all persons, for which the law makes no allowance in cases of crime. And because in this unfortunate man, the temporary madness, or delirium, caused by intoxication was of longer duration, from bodily infirmity, than is common in other persons, should it in his case have proved a ground of exculpation? This is a case which has been frequently tried in courts of justice, and certainly gives rise to a question of some nicity. In such cases, however, if the person had previous reason—if he knew the natural weakness of his constitution,

* Fodere. See Cases by Baron Hume and others.

and only become deranged by getting intoxicated, his may certainly be called a voluntary madness as much as an ordinary fit of intoxication in another person; the only difference being in the duration of the fit. If, therefore, the maniac from intoxication was proved to have been of sane and sound mind previous to his libation, even although he had been of weak intellect, there seems no reason for exemption from responsibility for his actions more than in other individuals. Accordingly, the law is quite peremptory upon the subject. But certainly such cases are very proper for recommendation to royal mercy, in order to receive a remission of the full sentence of the law, which might apply to persons of perfectly sound mind.

Case II.—Robert Stirrat, about 25 years of age, was tried at Glasgow on the 28th December 1831, for the murder and robbery of his aunt Mrs. M'Gibbon in October preceding.

Stirrat had always experienced the greatest kindness from his aunt, by whom he had been brought up from his boyhood, and with whom he had continued to live. Both Mrs. McGibbon and his other relatives always considered him to be a person of weak mind. Yet she employed him as her agent in a coal trade which she carried on. Other persons also considered him so unfit for transacting business, that they declared they only paid him money, because they were desired to do so by his aunt, with whom they had dealings. But though of weak mind, he had acquired considerable proficiency in the ordinary branches of education, and religious knowledge.

About the month of August, being about two months before Mrs. M'Gibbon's death, Stirrat had become very dissolute in his conduct, and absconded from her house with some of her money. On the 30th September, he returned, and was kindly received by her; but on the evening of the 2d of October, (the second day after his return,) when Mrs. M'Gibbon was lying asleep on a sofa, he deprived her of life by repeated blows on the head with an axe. He then robbed her repositories of a set of silver tea-plate and other valuable articles, which he disposed of to the keeper of a public house, who had been once a jeweller, and who immediately melted them to prevent recognition.

Eight of the witnesses called for the prosecution deposed, that they had known Stirrat for some time, and had observed his conduct on different occasions, having either conversed or transacted business with him. They all considered him to be a person of weak intellect. Some of these, who were medical men, had considered him at times to have been deranged, when they had been called to see him; but they did not say whether or not it had been caused by intoxication. Others said they had seen him on different occasions to have been very easily infuriated

into sudden bursts of passion. He had then a brother confined in the lunatic asylum.

When examined before a magistrate, Stirrat confessed the murder, and gave a circumstantial account of it. A letter also confessing it, and showing distinct aberration of mind, was found in his pocket addressed to his father.

While Stirrat was confined in jail before his trial, he was visited from twenty to thirty times by doctor Corkindale of Glasgow, who was at the utmost pains to try in every possible way whether or not insanity could be discovered in his case. But the result of his examinations was, that Stirrat showed no incoherence, hallucination, or insanity upon any subject. Doctor Corkindale, however, considered him to be a person of weak intellect, and of slender, though not unsound, judgment. A few days before his trial, I visited him along with doctor Corkindale, and formed precisely the same opinion of him.

The only medical witness upon his trial, who considered him to have been in a state of mental derangement, when he committed the crime, was doctor Balmanno, who admitted that he judged not from any direct evidence of this, but drew it as an inference from the nature of the act itself, which he thought could only have been that of a lunatic. But certainly the cool deliberate murder, the robbery, and disposal of the stolen property, could scarcely have been effected by a madman. Mrs. M'Gibbon having been asleep, Stirrat committed the murder without any provocation to excite violent passion, and there was an artful selection of the valuable articles and of the very suspicious character to whom he disposed of them, who melted and concealed them, as well as the reason he gave for having the articles in his possession,* altogether very unlike the conduct of a lunatic. Surely in all such cases some further proof of insanity than the nature of the deed itself ought to be required. This was so far unlike the deed of a really insane person, that here there was an obvious motive, whereas in murders committed by lunatics, there is generally none apparent.

Was insanity then proved at the time when the murder was committed in this case? Of this there was certainly no direct evidence; and judging from the situation of Mrs. M'Gibbon,—Stirrat's conduct at the time,—his manner of accomplishing the murder, and the motive of robbery which he had in view, it could neither be considered as a deed prompted by sudden violent passion, nor the *delirium* of insanity. Neither were the contrivance and execution of the transactions indicative of im-

* That his aunt's affairs had gone wrong, and that he had taken these as his share of the property.

becility of mind. On the contrary, they displayed considerable inventive and reasoning powers. And it may justly be doubted whether an *imbecile* could summon nerve and firmness enough to have carried through such a train of atrocities.

At some previous period, Stirrat had been seen in a state bordering upon insanity. But neither immediately before nor after the murder did his conduct or manner give any proofs of insanity to those who saw him, or betray any thing different from his usual state of mind and behaviour. And there is reason to conclude, as in the case of Waters, that the derangement of mind, which had appeared on some occasions previously, had been produced by the excessive use of spirits. When he returned to his aunt's house, it seems highly probable that it was expressly for the purpose of plunder, to enable him to proceed in the career of dissipation upon which he had entered. How far he had been prompted to do so by the person who received the stolen articles from him, and with whom he seemed to have been too intimate, does not appear. But the murder may have been committed, from what he considered a favorable opportunity for doing so presenting itself, in order more easily to accomplish and conceal the robbery. According to Marc, the motive of personal interest shows strongly *the moral cause* of murder in such doubtful cases.

It must be admitted, however, that his confession of the murder before a magistrate after he was apprehended, if not counselled to do so by his legal adviser, in order to support the plea of insanity, afforded one very strong proof of insanity. But in Glasgow, I am informed, prisoners are generally attended on their examinations before magistrates by a legal adviser, so that this confession may not have been entirely from his own free will. In confirmation of this, I may state that he always appeared much displeased when the plea of insanity was spoken of to him before his trial. Stirrat was condemned upon the verdict of a majority of the jury, who considered the murder and robbery, but not the insanity, proved. Upon a strong representation to royal mercy, however, he was reprieved during his Majesty's pleasure.

Case III.—John Howison, about 45 years of age, a sturdy beggar, but formerly a hawker of small wares, was tried before the High Court of Judiciary, 31st December 1831, for the murder of Widow Geddes, near Cramond, on the 2d day of same month.

Howison, who had a very peculiar and forbidding appearance, was seen going about the hamlet, where this unfortunate old woman lived, about 11 o'clock in the forenoon of the day on which she was murdered. From several persons who saw him he received charity.

That Howison was the person who perpetrated the murder was clearly established; and, when he left the cottage where it was committed, he was seen to come out, close the door behind him, and look eastward along the line of cottages, (by which was the only exit to the road,) in order to see if any one observed him. He then ran down a bank (where there was no path) to the high road, in place of returning eastward by the cottages, and continued to run to the westward along the high road as fast as he could.

He was apprehended next day at Corstorphine, a village between two and three miles to the south from Cramond. When taken he denied all knowledge of the murder, and said he had come from Glasgow. To other persons who saw him on the same day and accused him of the murder, he replied, that nobody saw him do it, and they must prove it.

When Howison was brought into Edinburgh he was visited by doctor Spens, who also saw him several times before his trial, and had conversations with him of considerable length. In all these interviews with him doctor Spens could discover no indication of insanity, no hallucination, nor disorder of intellect. I visited him twice, and formed a similar opinion of him; but I considered him a man of low or weak intellect, and to be possessed of a great degree of cunning. When I saw him he denied all knowledge of the murder, which circumstance I conceived at the time to be a strong proof of sanity, and of his knowledge of the heinous nature of this crime in particular, if he really was the person who perpetrated it. He afterwards underwent several judicial examinations before the Sheriff-Substitute and Procurator-Fiscal, who stated, that his conduct when before them was composed and perfectly rational.

Doctor Alison, doctor Mackintosh, and doctor Scott, as well as doctor Spens and I, heard the evidence at the trial, so far as regarded the conduct of Howison, both before and after the murder, as also regarding his state of mind for some time previously.

A woman from the Canongate, with whom Howison had lodged, had known him for a considerable length of time, for he had lodged with her six years previously. He then left her to go to England, where he had remained till within the last two months; and on his return to Edinburg he was so much changed in his appearance and in his circumstances, that she did not at first know him. He had formerly been a hawker of small wares, was clean in his person, and like other people; now he was a beggar, dirty in his appearance, and peculiar in his mind. He said he had a fever in England, of which no correct account could be obtained. She detailed several peculiarities which she had observed in Howison while her lodger. The chief of these were

a voracious appetite,—a practice of pricking his arms with pins or needles, to get blood from them, which he thought did good to a painful affection of his head,—he sprinkled salt on his bed to keep away "fleas,"—and when he carried salt about his person and upon his head, which he had said was to "keep away the *witches*," it is probable he had a similar object in view, which he did not choose to avow; for he seems to have had faith in the power of salt to destroy vermin, but was never known to have given any other indication of belief in witches. Every one who had known him said that he conversed rationally, and they were convinced he knew perfectly what was right or wrong; and that they could not have believed he would have been guilty of such a crime. He was always honest in his dealings, and provided for himself.

He had at times been seen engaged in performing some of the devotional ceremonies of the Roman Catholic religion; and, for some time before his imprisonment, he had attended regularly at the Quaker Meeting House, where he was considered deranged in his mind from his peculiar manner and behavior. From all I heard of these, I conceived it probable that he had been engaged at times, when in the meeting of Friends, in Romish devotions and observances, for his mind seemed to have been deeply impressed with these; and he had often crossed himself, and spoken of the Virgin Mary. I was also of opinion that his conduct showed slight indications of insanity.

Neither doctor Spens nor I had, in our interviews with him, observed any proofs of insanity; and no part of his conduct immediately before or after the murder afforded any evidence either of alienation or unsoundness of mind. But doctors Mackintosh, Scott, and Alison conceived, from his previous history, that, although his conduct showed no insanity at the time of the murder or afterwards, it was *probable* he had labored under some hallucination or mental delusion when he committed the deed.

From all these circumstances, was there sufficient evidence of the insanity of Howison, or such a degree of it as should exempt him from the penal consequences of his crime? Is it enough to exculpate a murderer, who committed the crime in the apparent possession of reason, that at a previous period he evinced some slight indications of insanity—had some eccentricities of conduct—and had some peculiarities in his religious belief and observances? The admission of such a principle would certainly neither be conformable to the principles of law, or of medicine, or to common sense.

But another important question here presents itself,—Were the previous slight signs of mental derangement sufficient to

warrant the conclusion, as to the *probability* of mental aberration at the time of the murder? For, there are several cases on record of murders having been committed in sudden fit of insanity; but in these there were other proofs of it in addition to the deed itself. Besides, there can be no doubt, that such actions are apt to occur in those who have previously exhibited indications of insanity. If such a state of mind had occurred in Howison, it had been of very short duration, and was not shown to have existed by any part of his conduct either before or after the fatal deed. He had spoken rationally to persons who saw him immediately before the murder, and his conduct after it showed the greatest circumspection and prudence, as well as considerable judgment in adopting every precaution to conceal it. When to this is added, that he had never previously been in a decided state of insanity, such as either to have rendered him a dangerous person, or to have warranted his confinement—his perfectly composed and rational conduct at his examination before the sheriff—his denying all knowledge of the crime—and his never having shown any proofs of mental derangement to those medical gentlemen and others who saw him and conversed with him, surely some stronger proof of insanity was required to establish this plea. For if insanity was founded on such a principle as that of previous slight symptoms of it, the crime committed becomes the only proof of insanity at the time. But surely other evidences of insanity besides the act itself should be required; for the distinction between such a sudden and transitory fit of insanity, existing only during the execution of the deed, and a fit of furious ungovernable passion, could not be made, unless the individual had been so affected at a previous period, or was subject to one or other of these states. Accordingly, it was the unanimous opinion of the judges and jury, that Howison's insanity at the time of the murder was not established; so he was condemned to execution.

In all the cases where the plea of insanity is brought forward in exculpation of crime, if there is not evidence of decided insanity, there is at least some peculiarity in the mental constitution of the individual for whom this plea is urged,—some state of mind, rendering him unlike the generality of other men, upon which the plea is founded. The most common of these states of mind are, 1*st*, Natural imbecility, or weakness of intellect; 2*d*, Irritability of temper, or liability to sudden violent bursts of passion; 3*d*, Weakened intellect, from previous injury of the head or affection of the brain, such as by fever or stroke of the sun, by which the mental faculties have been more or less impaired; 4*th*, Eccentricities of conduct; 5*th*, Fits of derangement

by the excessive use of spirits; 6*th*, Natural predisposition to insanity, and some previous symptoms of it.

These may be different in degree in different individuals,—they may vary at different times in the same individual,—and they may be variously modified without reason being either wanting or very defective,—or they may approach to idiocy and insanity. Hence the difficulty with which this subject is beset. To give a detailed account of each of these states would lead to a very wide field of inquiry, and carry me far beyond the limits and intention of the present essay. I shall therefore conclude by a few further remarks on the cases which have been presented to our more immediate consideration.

In order that insanity can constitute a valid plea of exculpation or exemption from the penal consequences of a crime, the laws of this and other civilized countries require that it be completely and absolutely proved on the part of the prisoner. The aberration of mind must have been absolute in degree, and so complete at the time of the deed, as to have deprived the individual of a knowledge of right and wrong,—of knowing friend from foe. The law makes no allowance for a weak and crazy intellect; or for the madness of involuntary intoxication. Neither does it make any allowance for the person having been subject to occasional fits of insanity, unless there is evidence of it at the time when the crime was committed. Upon these principles alone has this plea been sustained.*

If previous insanity, weakness of mind, or individual peculiarities of temper or character, were to be admitted as sufficient evidence of insanity, principles would be established by which few great crimes would meet with punishment; the bonds of law and of society would be loosened, and crimes would multiply.

In the three cases which have just been detailed, we have three very distinct and different peculiarities of mind upon which the plea of insanity was founded. In the *first* case, that of George Waters, we have insanity at the time of the deed proved, in a man of naturally weak mind; but in a mind which was easily upset by a small quantity of ardent spirits, to which he unfortunately had become too much addicted, and which there is too much reason to think was the cause of his deranged state of mind at the time of the murder of his son. In the *second* case, that of Stirrat, we have another example of a person of weak judgment, with natural predisposition to insanity, and a mind easily excited, having taken to habits of dissipation; in whom no insanity was proved at the time of the murder, and

* Hume on Crimes.

whose motive for the commission of it was evidently to rob his benefactress in whose house he lived. In the *third*, that of Howison, we have another example of a man of weak mind, low intellect, and consummate cunning, who had at a previous period shown some indications of insanity, but who had never been considered deranged, nor exhibited any want of reason in his conduct at the time of the murder. In the first, the plea was considered sufficiently proved,—in the second it was rejected by a majority of the jury,—and in the third, it was unanimously rejected as not proven.

In considering medico-legal cases involving the question of insanity, it is necessary for the medical jurist to pay particular attention to the history and conduct of the individual supposed to be insane; but more especially to his conduct and manner immediately before, at the moment of, and immediately after, the commission of the crime, in order to ascertain whether or not any symptoms of insanity then existed. Hence conversations of medical men with the individual are not, in all cases, of importance. But such interviews should, nevertheless, take place. For in some cases madness is at once obvious; in others, the interview may tend to confirm the general character of the individual, either for weakness or peculiarity of mind.

Such interviews, however, should be very cautiously used as affording proof of *soundness* of mind. For the insanity, though complete at the time of the crime, may have gone off, as in the cases of Sir A. Kinloch, tried 1795, and Campbell, tried at Glasgow, 1826,—it may be successfully concealed by the individual, or the subject of his madness may not have been touched upon during the conversations with him. Cases of this kind have occurred and are on record.* An individual may likewise show a perfect knowledge of right and wrong, as upon the subject of murder, and may nevertheless be completely blinded as to the crime committed by his own individual act, from a morbid hallucination relative to the particular case. Hence judges should keep in view, that, although medical men and others discovered no indications of insanity after several conversations with the person, nevertheless he may have been, and still may be, insane.

In many doubtful cases, therefore, a medical witness cannot answer decidedly from his own experience, if asked, whether or not the individual is insane. He can only speak to what he has himself seen of the individual, which may not have afforded any evidence of insanity. But if asked to give an opinion upon the evidence of others, he can say, upon the evidence of credible witnesses, as to the conduct of the individual, whether

* See cases related by Hume, Haslam, Beck, &c.

or not, and at what periods of his history, he showed indications of insanity; leaving the judges and jury to decide as to the validity of the plea in exculpating the prisoner from punishment. In such cases the question for the jury comes to be, was the insanity or aberration of mind at such a time, and in such a degree, as legally to exculpate him?

By a personal interview with the person alleged to be insane, though we may not discover that he is insane, we may see that he is not quite right. For, in most of these cases, there is something about the individual, which makes him unlike the generality of other people. This state is often very obvious, though it is not easily described. It struck me very forcibly at my interviews with each of the three individuals whose cases I have just described. There seemed in all of them some want of intellect. They did not seem to possess the same composure of mind common to other people. They did not show that ready and rational apprehension of subjects talked of, followed by the sensible remarks we observe in ordinary persons. They had each a low degree of intellect, and a great look of cunning.—They spoke rationally, and with consideration, but not with ordinary energy or depth of reflection; consequently their judgment appeared to be weak. They had each a vacant unsettled look. The eyes of Waters and Stirat were particularly unsettled. In Howison this was not so much the case. He seemed to have more depth of mind, but a greater want of mental activity. While the others seemed at times quick and alert, he seemed sullen, sluggish, and indolent: so that his apparent apathy at the crime he had committed was not to be wondered at. He certainly had the look of cunning and ferocity; so much so, that in his presence other persons felt afraid. The others both expressed and seemed to feel deep regret and contrition for their deeds, which they confessed; while Howison concealed his crime to the last.

Of these three individuals, Howison only was executed for his crime; and it is so far satisfactory to know, that the gentleman who acted as his agent in conducting his defence,—the clergyman and other persons who attended him after his condemnation,—in their interviews with him, discovered no indications of insanity in his conduct. He appeared to them to have a somewhat peculiar, a malevolent, and ferocious disposition; also a very great degree of cunning, and consequently he exhibited the greatest concealment and reserve in all that he said or did. His eccentricities, which were sworn to at his trial, and upon which his plea of insanity was founded, he positively denied, as well as the murder which had been clearly proved against him.

From all that can be learnt of Howison's history, it appears evident that his mind had become not quite sound, and that at times he had shown indications of insanity. But it is also to be observed that the degree of unsoundness that had existed, and continued to exist, did not prevent him from taking care of himself; from being correct and honest in his dealings; or from appearing, to the people with whom he lodged, rational and intelligent in distinguishing between right and wrong. We cannot help arriving at the conclusion, therefore, that his case, in its most favorable aspect, was one in which the plea of *insanity* was not made out to have existed in so complete a degree, at the time of the murder, as the law requires to exculpate him from the responsibility attached to it.

35, *Dublin Street,*
Edinburgh, 25th May, 1832.

ART. X. *Remarks on Umbilical Hæmorrhage.* By THOMAS RADFORD, Esq., Senior Surgeon to the Manchester Lying-in Hospital and Dispensary for the Diseases of Women and Children. [*Taken from the Edinburg Medical and Surgical Journal, for* 1832.]

THE bleedings which occur after birth from the *funis umbilicalis*, and from the *umbilicus* after the separation of the cord, are usually confounded as to the source whence they arise, and the causes by which they are produced.

I.—*Bleeding from the Funis.*

This species of hæmorrhage may occur immediately after the application of the ligature, when the child, being laid aside for the short space of time required to make the mother comfortable, may be found drenched in blood. It may also happen several hours after birth, and the nurse may be awakened to an inquiry by the feebleness of the infant, and the unusual pallor of the lips and general surface. This hæmorrhage may proceed either from the arteries or from the vein, and generally depends upon an ineffectual application of the ligature, although bleeding would not universally happen if the funis were left untied.*

* Dr. Eller, Physician at Berlin, relates several instances of the navel of children being left untied after they were cut, without being attended with any hæmorrhage or other bad consequence.—Commerc. Norimberg, 1733, Hebd. 48, § 2."—Edin. Medical Essays and Observations, Vol. iii. page 405.

Analogy substantiates this statement. In the brute creation the funis is always left loose, yet hæmorrhage never to my knowledge takes place. This effect may be readily accounted for, by the method which the mother adopts in order to separate the young from its connection with the placenta. As soon as the fœtus and its appendages are expelled from the *uterus*, the brute mother commences the process of separation, which is accomplished by gnawing and twisting the *funis*. The influence of contusion and of torsion upon the blood vessels in preventing hæmorrhage, is well seen in severe gun-shot wounds, and also in some of the serious accidents produced by machinery, in which cases the limb is twisted off from its connection with the body. Under these circumstances, hæmorrhage is comparatively trifling. But here, as under many other circumstances, analogy is insufficient upon which to found rules for general practice. On the other hand, we shall sometimes meet with cases in which a tight application of the ligature will not always prevent this occurrence. The causes giving rise to this failure of security, and the practice to be adopted in order to avoid their operation, I shall now proceed to detail.

I remark in the first place, that the pulsation of the *funis* should always have ceased before the ligature is applied, because this circumstance is the surest indication that the process which is essential to the independent circulation of the fœtus has commenced; and also that those changes have taken place in the vessels which afford security against bleeding. We occasionally meet with the *funis* unusually *thick*, in consequence of the very large quantity of *glutinous matter* contained within its coverings. In such cases, if we adopt the usual practice of tying the *funis*, by "placing one ligature at a certain distance from the abdomen; and the other, two inches distant," on the placental side, bleeding will most probably occur. If the extremity of such a funis, tied as above stated, be examined, the orifices of the vessels will be seen patulous, thus proving an ineffectual compression of their sides. Some time ago I was called (about three hours after its birth) to an infant which was bleeding. The hæmorrhage had been considerable; the skin was extremely pallid, and the pulse scarcely perceptible. The binder, and also the cloth which enveloped the *funis* were removed. The ligature, which had been tightly placed upon the navel string, was now become loose. The *funis*, which had diminished in thickness, was raised for the purpose of examining the vessels, and their orifices were seen widely gaping. The practice to be adopted in such cases, in order to prevent the dangers arising from the ordinary method of tying the *funis*, is as follows: Let the ligature be first tightly placed upon the pla-

cetal portion of the cord, and then let another ligature be loosely placed upon that portion of the funis which is to remain connected with the fœtus, and which must be tightened after the division; and in order to give additional security, let a second ligature be placed upon this part. The advantage of this method arises from the more decided influence which the ligature produces upon the calibre of the vessels, in consequence of the more serous portion of the gelatinous fluid escaping from the divided extremity.

The umbilical cord may be diseased, being either *ossified* or of a *cartilaginous firmness*, and it will be obvious that such a condition exposes the infant to the dangers of hæmorrhage. If ossification has taken place, the cord will break when the ligature is tightened, in consequence of the extreme fragility of its texture. A case, illustrative of this accident, is related by Mr. Logan, in the number of the Edinburgh Medical and Surgical Journal for April last. He was under the necessity of removing the ligature several times, and re-applying it on account of the bleeding which took place. The application of a broad ligature (such as a piece of tape) in this case, promises a greater chance of security against bleeding than one of the usual thickness, as a thin ligature would inevitably divide the sides of the vessel. A *varicose* state of the umbilical vein is occasionally met with. In some cases the disease occupies only a small portion of the vessel, while in others, its whole canal is morbidly dilated. In this state of the cord, bleeding will most assuredly occur, either from its extremity, immediately after its division, or, according to doctor Dewees, in the course of two or three days, in consequence of ulceration taking place in the side of the vessel, from the ligature being tied so as to include the diseased portion, that is, nearer to the placenta than the dilated portion of the vein. To prevent this accident, then, the ligature must never be placed upon the varicose part, but must invariably lie nearer to the abdomen of the child than the situation of the disease.

II.—*Bleeding from the Navel.*

The complete separation of the navel string is not always accomplished at the same period of time, but generally from the fourth to the seventh day; at which period, the mouths of the umbilical arteries and vein are usually closed. It occasionally happens that this closure is not effected by the powers of nature; and hence when the funis comes away, or in a short space of time after, an hæmorrhage commences from the navel, which generally destroys the infant. This is an occurrence which produces considerable anxiety to the medical attendant; it is gen-

erally confounded by the nurse and friends with hæmorrhage arising from displacement of the ligature, and is too often ascribed to the negligent and imperfect tying of the funis at the time of birth. Thus the character of the accoucheur suffers undeservedly.

I was requested to visit an infant seven days after birth, that was bleeding from the umbilicus. The hæmorrhage had commenced in the night, shortly after the separation of the funis. The gentleman (whose case it was) had made a judicious attempt to arrest the bleeding by the application of a graduated compress, supported by straps of adhesive plaster, and a roller. In a short time, however, the blood again appeared, trickling from under the bandages, and the poor infant was nearly exhausted. The applications were removed, and a second attempt was made to compress the bleeding orifice, but with as little success as before, as in a short time blood was again found oozing from beneath the bandages. A third attempt was made to effectually check the effusion of blood, but again failed, and the child died in the afternoon. Upon examining the part after death, the vein was found uncontracted, and the umbilicus was sloughy, ragged, and of a dark color. I have seen compresses, moistened with powerful astringents, applied to suppress this hæmorrhage. I have also seen an attempt made (but unsuccessfully) to bring together the sides of the bleeding vessel, by passing a hare-lip pin through the integuments, and thus pinching it up. Several cases of this nature have come under my observation, but they have all been fatal except one.

A hospital midwife, in great alarm, brought an infant eight days old to me. Whilst she was dressing it, the funis came away, and a discharge of blood from the umbilicus commenced. Upon examination, the binder and the under parts of the child's dress were found soaked with blood, but the bleeding had now entirely ceased. A compress, supported by adhesive straps, was applied; and no more hæmorrhage occurred. I was induced to suspect that this bleeding came from one of the arteries. The result of umbilical bleeding in my practice has been invariably fatal, with the exception of the case just related; and, from an extensive inquiry made amongst my professional friends, I have ascertained this to be the usual termination. Converging at the umbilicus are three vessels, two arteries, and one vein,—from all of which vessels hæmorrhage may occur; hence we may have venous and arterial bleeding. The opinion usually entertained as to the dangers arising from these two kinds of hæmorrhage, (as occuring in other parts of the body,) is not true in the cases referred to in these observations. Venous hæmorrhage from the umbilicus occurs frequently, and in general terminates fatally.

Arterial hæmorrhage, on the contrary, in this situation, is more rare, and more fortunate in the result. I have already alluded to the insufficiency of compression to arrest bleeding from the umbilical vein. This is readily accounted for, when we consider the situation of the vessel, which is placed behind the flexible abdominal parietes, to which it is attached, there being nothing firm or resisting behind it, by the aid of which a compress might effectually obliterate the calibre of the vessel.

Another circumstance unfavorable to the operation of compression is the indisposition to contraction in the vein. From my examination of infants after death, I conclude that this vessel is not materially changed immediately after birth. The calibre is not completely and permanently obliterated at the time of the separation of the funis. Its extremity alone is consolidated by adhesive inflammation, the remaining portion of the vessel being filled with coagulated blood, which is gradually absorbed. The removal of this coagulum commences at its umbilical extremity, at which place it is first converted into ligament. Escharotics have been recommended to arrest bleeding from this vessel. The danger of propagating inflammation to the abdominal cavity in consequence of the immediate connection of this vessel with the peritoneum, would be a sufficient objection to the employment of these means, besides their inadequacy to accomplish the end. The actual cautery has also been recommended, but its application is equally dangerous. I have also stated that an attempt to bring together the sides of the bleeding vessel, by passing a hare-lip pin through the integuments, &c., was unsuccessful. The reason of this will be readily understood if the condition of the orifice be considered, which is usually in a ragged state of ulceration, and sloughy, and therefore highly unfavorable to obliteration by adhesive inflammation. From the preceding observations it will appear that little reliance is to be placed upon the means usually recommended for the management of bleeding from the umbilical vein. Under these circumstances, then, what is to be done?—we have no alternative but that of cutting down upon the vessel and placing a ligature upon it. If we have recourse to this expedient, an incision must be made through the integuments in a direction upwards from the umbilicus, cautiously cutting down to the vessel, which, by stretching its extremity, is felt to be of a cord-like firmness. As this vessel lies external to the peritoneum, great care must therefore be taken in detaching the membrane from the vein, neither to wound nor include it within the ligature. This practice promises the greatest chance of success, and at all events does not (if due care be observed in the operation) place the little patient in a more dangerous situation.

An inquiry will naturally be made, is a ligature to be applied in all cases, and under all circumstances, of umbilical bleeding?—The case before stated of a successful termination by means of a compress, &c. will sufficiently prove that a hasty cutting down upon the vessel, and an indiscriminate application of a ligature is not to be recommended. The bleeding in this instance I suspected to proceed from one of the arteries. Hæmorrhage from these vessels is much more manageable on account of their greater length and the contractile power of their coats. A case of fatal umbilical hæmorrhage is related by Mr. Pout in the twelfth volume of the London Medico-Chirurgical Transactions, in which, from the examination after death, Mr. Pout concludes that the hæmorrhage proceeded from one of the arteries. He says, "if ever another case of the kind were to come under my care, I should not hesitate to cut down upon the arteries and tie them as the only means of security."

As the vessels run in opposite directions, it will be important to have a correct diagnosis, in order not to make fruitless incisions. In cases of venous hæmorrhage, the blood is uniformly thick and dark-colored, and is never thrown forcibly out, but oozes incessantly from the mouth of the vessel, which is in the condition I have before stated. On the other hand, in cases of arterial hæmorrhage, the blood is of a lighter hue, and must in some measure be influenced in its discharge by the action of the vessel. In order to act upon the most certain grounds, it would be well to try the influence of compression, which, if the hæmorrhage be arterial, I believe would be successful; but if this trial should fail, and the other diagnostics of venous bleeding be present, then I should not hesitate to cut down upon the vein, and place a ligature upon it as the only security.

The foregoing observations will, no doubt, be found interesting to the young practitioner. We well remember that, in the early part of our obstetric practice, we have seen slight hemorrhages follow the division of the umbilical cord. We have seen great differences in the size of the cord, and also in its density; but we have been led, after many years observation, to believe, that unless there be some absolute defect or disease in the cord, or about the part where its vessels terminate in those which pass through the abdomen, we have nothing to fear from hemorrhage from the division of the umbilical vessels, still this does not lessen the importance of the observations under notice; since if no other advantage attended the present investigation, than awakening the attention of the young practitioner to the danger of inattention, this alone will entitle the subject to our most careful consideration.

We have never had any serious accident to occur in our practice from umbilical hemorrhage, but we have in a few instances seen blood enough ooze, from the divided parts, to lead to considerable palor and debility. In all cases of this kind, after the discovery of the escape blood, we have easily succeeded in checking it by applying the ligature still tighter. This circumstance has made us very particular in providing a ligature of proper material, and in applying it to the cord before the division.

The accoucheur should never omit to see that a proper ligature is in readiness. Several good flaxen or cotton threads, free from unevenness, should be slightly twisted; and, the ligature so prepared should be of sufficient length, to enable us to lap it about the fingers, so as to enable us to apply it very tight. This, indeed, should be our leading object to tie as tight as we can—since we have nothing to fear from tying too tight, as the cord is destitute of sensation, we can never do any harm: the only rule then seems to be, that we draw the ligature as tight as we can, by means of the fingers. Whether the cord be small or thick, we will not easily draw the ligature too high; but I am convinced that where the cord is bulky, we cannot tie too tight; and, we are convinced that nearly all the accidents, arising from division of the cord, are owing to not drawing the ligature tight enough—we never leave an infant after tying the cord, till we have ascertained that no blood escapes.

ART. XI. *A Case of Gutteral Polypus, which had continued several months, in despite of active treatment; and which was successfully treated.* By the EDITOR.

D. W., from the Eastern Shore of Maryland, aged about 14 years, was brought to me, in April 1832; I found the left nostril greatly stuffed with polypi, and one, of great size and density, extending posteriorly so as to press far down into the pharynx, and forcing down the velum palati, far forward into the mouth. Respiration was considerably interrupted—there was great paleness of face, and other symptoms of debility.

Upon carefully examining the parts affected, I discovered that the nostril was so completely filled that, there was no prospect of passing in a wire, by means of a double canula in the usual way, with a view of strangulating the main polypus; I therefore, prepared the following simple apparatus. Giving to a common catheter a little more curve than usually employed for the catheter,

a piece of well annealed silver wire was connected in its middle, to the end of the catheter, by means of a thread passed through an eye of the instrument—Now taking the two ends of the wire along with the tube, in the right hand, the whole was passed through the nostril, and the end of the catheter with its connected wire brought around the velum palati and forwards into the mouth. The connecting thread was now cut, by means of scissors, and the wire being drawn further through the nostril, and out at the mouth, was formed into a large loop. This loop was put over the fore and middle fingers of the right hand, and in the usual way carried back behind the tumor; and, being so placed behind the tumor, the wire was drawn out of the nose till the loop came into contact with the root of the polypus. This was now twisted with as much force as was thought to be safe as regards the strength of the wire. It was soon seen that the circulation was considerably interrupted in the tumor, which assumed a livid color.

Upon calling in the forenoon of the next day, I was alarmed at the laborious breathing of my patient. He lay with his mouth open and breathed almost convulsively; there was lividity of the face, and some turgidity about the eyes. Looking into the mouth I found the tumor greatly swoln, and pressing so far into the pharynx, and so closely upon the root of the tongue that I was greatly alarmed for his safety, and judged it necessary to attempt immediate relief.

Hoping that the wire might have strength and ductility sufficient to enable me to twist off the root of the polypus, I cautiously twisted the canula which contained the ends of the wire; but, before I succeeded in dividing the root of the polypus, the wire broke while the tumor remained firmly fixed. This occurrence placed matters in a very unpleasant condition—the patient suffered greatly from the obstruction in his breathing, and the swelling and solidity of the tumor was now such as to endanger immediate suffocation.

The catheter was again armed with a silver wire, and passed on through the nostril, till the end to which the wire was connected, was made to pass out at the mouth. The thread connecting the wire to the tube was cut, and the catheter withdrawn. The ends of the wire which hung out at the nostril, were passed into the tubes of a double canula. We should have mentioned that in our first operation of applying the wire, the ends were passed through a double canula after the loop was passed over the tube, and the wires twisted, in the usual way, by turning round the canula. Having passed the ends of the wire through the canulas, while there projected a large loop of

the wire from the mouth, I now proceeded by means of the fore and middle fingers of the right hand to pass the loop beyond the tumor; I found this one of the most difficult operations I ever engaged in, and apparently attended with imminent hazard.—Such were the size and firmness of the tumor, that it was with great difficulty, and not without considerable force, that, I could succeed in passing my fingers low enough into the throat to reach the lowest point of the tumor. The tongue became black, the face livid, the countenance ghastly; cold perspiration covered the face; and, indeed, the whole aspect of the case presented the most frightful apprehensions of immediate suffocation. I had a most manly little patient to deal with, and he sat up firmly under the appalling circumstances, or, in all probability, he wouldhave perished; but by a minute's firmness I was enabled to carry the wire deep enough to pass the loop, from my fingers over and behind the tumor. Having withdrawn my fingers, and speedily run the canula on the wires, till it came in contact with the root of the polypus, I gave it a turn or two, to fit the wire to the tumor. Then running the polypus knife of John Bell quickly along the canula as a guide, I readily cut off the root of the tumor.

During the latter part of the operation the patient was still laboring under considerable difficulty of breathing—such as to require all possible expedition in this stage of the operation.

The root having been in considerable part cut off by the first ligature, was easily separated by the knife; the polypus dropped through the mouth, and he was instantaneously relieved from the most fearful apprehensions of suffocation—the strangulation which had existed from the first ligature, prevented any considerable hemorrhage; and in one minute my patient, from being in the most imminent risk of suffocation, and a state of extreme suffering, was relieved of all his sufferings, mental and bodily, except his weakness. The polypus was very dense; and weighed upwards of two ounces. In two or three days his appearance was much improved, and he became cheerful.

It was soon found, however, that the nostril was filled with many polypi. So soon as his health, and the soreness admitted of it, we commenced the removal of these smaller tumors. It was found necessary to repeat these operations, once or twice a week, for several weeks; and at every sitting a considerable number were removed. At length the nostril became freed, so that he could blow freely through it. To these frequent pickings with the forceps, was added the compound powder of sanguinaria. This kept up a considerable discharge, and thus was my patient enabled after several weeks to return home, apparently freed from the disease. After some weeks he returned,

and upon trial I found two or three polypi, which being removed, I believe the nostril was completely relieved. He was now sent home with strict charges to continue the powder; and return to the city should any other polypi present themselves. It is now, I think, at least three months since I saw him; as I have not heard to the contrary, I feel pretty well assured that the disease has not returned.

We some years ago had a desperate case of polypus—the tumor had been frequently removed, and returned with aggravated circumstances. We had great difficulty in removing the disease; and, fearing a return, the patient being from North Carolina, we recommended the actual cautery. It was effectually applied, and, there was no return of the disease. This case was described in the late Philadelphia Medical Recorder. We consider the compound powder of sanguinaria an important remedy in aid of the knife, in polypus of the nose. It is composed of sanguinaria canadensis, tobacco and calomel.

ART. XII. *Observations on Epidemic Cholera, as it appeared at Baltimore, in the summer of* 1832. By HORATIO G. JAMESON, *Consulting Physician for the City, and for the Cholera Hospitals.*

WE have been led to believe that notwithstanding the multiplicity of publications on the subject of epidemic cholera, that, there is still room for a more correct theory, founded on the pathology of the disease: and, consequently, we may expect a more successful and a less diversified treatment of it, to result from a proper knowledge of the disease.

We have thought proper to commence our observations with the publication of our hospital practice, which we can best illustrate by giving a diary of all the cases. A summary of the facts thus afforded will enable us, with our experience in private practice, to establish a settled and satisfactory plan of treatment.—The reader will not loose sight of the fact that, many of the cases received at the hospitals were moribund when brought in, and a large proportion were laboring under the disease in its most aggravated form, to which we may add the fact that, a great majority of the public patients were persons of intemperate habits.

The following diary of cases was kept by my friend doctor Carrere, physician to Hospital No. 2:—

August 10th, 1832. Betty Buckler, æt 40, Charles and Lombard streets. When she entered the hospital, was in a state of

intoxication. Blood had been taken, and a mustard plaister applied to the epigastrium; complained of pain in the head and stomach, and sickness at the stomach; tongue slightly furred; bowels constipated, took the following. ℞. Sup. carb. sodæ ʒj, Ol. sassafras gtt. v, Tinct. opii gtt. LXX, Aqua ℥vj. A table spoonful every hour; towards evening, pain in the head and stomach, and sickness much relieved. ℞. Submur. hydr. grs. x, at bed time.

11th. Rested well during the whole of the night, pains and sickness nearly left her, medicine commencing to operate—relieved.

14th. Betty Buckler complains of headach; tongue furred. ℞. Pil. calomel and aloes, repetant.

15th. Betty Buckler; tongue furred, bowels not well opened. ℞. Calomel and aloes; bowels opened, stools bilious, feels better.

16th. Betty Buckler; rested well last night, feels much better to-day, took nourishment. ℞. Tinct. gentiana ʒj, 3 times a day.

17th. Betty Buckler; convalescent.

August 10th. Aaron ——, æt 30, Ruxton lane. Mustard plaisters had been applied to the wrists, thighs, and epigastrium. Tongue moist, extremities cold, voice husky; had been eating a quantity of water melon; skin on the hand shrivelled—in articulo mortis when brought in—saline injections were used, after which the temporal artery was opened, from which about 1 pint of blood was obtained.* He came in about 11 o'clock in the morning, and died a few minutes before 2 in the afternoon.

Aaron ——. On examination of the body, the following were the appearances: Lungs nearly natural; heart flaccid, left ventricle empty; in the right ventricle there were found a few drops of dark coagulated blood; liver pale; gall bladder distended with green bile, stomach much congested, and traces of black motling; intestines congested; bladder contracted.

August 10th. Justus Wright, æt 21, Sharp street. Brought out at 8 o'clock, intoxicated; discharged immediately.

August 10th. Mr. Cooper, æt 42, Franklin lane. Stomach irritable, vomiting occasionally; bowels had been opened 2 days before entering, evacuations bilious; tongue furred; at 2 o'clock took submur. hydg. ℈j; sinapism applied to the epigastrium, vomiting ceased; mixture continued. ℞. Ol. ricini ℥ij. ℞. Cal. and aloes.

Aug. 12th. Mr. Cooper; stomach very irritable; sinapism applied to the epigastrium, and effervescing mixture; bowels opened several times; towards evening the stomach quieted by the effervescing mixture; took some chicken water, which was retained.

*See Appendix (A).

August 13th. Mr. Cooper; rested well last night, and better in every respect through the day.

14th. Mr. Cooper; much better. ℞. Tinct. gentiana ʒj.—Brandy and water every three hours; took some broth.

15th. Convalescent; discharged.

August 11th. Samuel Cheers, æt 32, Ruxton lane. Has been unwell since Wednesday morning, with vomiting and purging, what was thrown up was similar to rice water, that passed by stool *curdled*, cramps of stomach and extremities. ℞. Saline mixture; sinapisms applied to the epigastrium and extremities. ℞. Calomel grs. vij.; Camphor grs. ij.—a short time took calomel ℈j.—aloes grs. x.—a short time after taking it he vomited. ℞. Opium grs. ij.—Calomel grs. xx. At 2 o'clock an injection was administered, but to no purpose; at ½ past 2, took 1¼ drops croton oil, and ¼ grain of opium every hour, took two doses.—A tobacco injection was then given; relieved the spasm in the stomach, produced a slight acceleration in the pulse, and vomiting. ℞. Submur. hydg.—Camphor—Carb. ammonia ana grs. v. to be given every hour. Cramps occasionally in the legs; powders continued throughout the night and morning (12th), with brandy every ¼ hour; died at 5 o'clock.

Samuel Cheers. Post mortem examination.—Lungs nearly natural; heart flaccid, left ventricle empty, in the right small quantity of dark thick blood; liver pale; gall bladder much distended with green bile; stomach much congested; intestines the same; bladder contracted.

August 12th. Matilda Jackson, æt 19, Washington st. Had been lying out of doors for 36 hours; when brought in, was in a state of collapse; pulse small; tongue cold; vomiting and purging similar to rice water. ℞. Saline mixture. ℞. Submur. hydr. camphor, carb. ammonia ana grs. v., one powder to be taken every hour; brandy and water every ¼ hour; sinapisms applied to the epigastrium and legs. Pulseless from 5 o'clock in the afternoon.

13th. Matilda Jackson; pulseless since 5 o'clock yesterday; powders continued; about 2 o'clock in the afternoon, excitement began to take place; tongue warm; stomach somewhat affected; 9 o'clock, pulse better; surface warmer.

14th. Matilda Jackson; powders continued every three hours; brandy every ¼ hour; effervescing mixture to allay the irritability of the stomach; evening, not so well; bowels not opened.—℞. Ol. ricini—Ol. terebinth, ana ʒij., every hour; mixture continued; brandy and water as usual.

15th. Matilda Jackson; appeared better; ol. terebinth, ol. ri-

cini ana ʒij, continued; effervescing mixture continued; towards 7 o'clock became delirious, and died ¼ past 9 o'clock.

Matilda Jackson. Post mortem examination. Heart flaccid and empty; liver pale; gall bladder distended with yellow bile; stomach had a quantity of the rice water-matter in it; intestines some bile in them, very much congested, both stomach and intestines; bladder contracted to the size of a walnut.

August 12th. Samuel Branson, æt 40, Ruxton lane. Complains of slight sickness at the stomach; bowels affected since Wednesday; watery discharges; had eaten some watermelon on that day; had taken nothing before coming in. ℞. Pil. calomel and aloes, sinapism to the epigastrium; bowels acted upon several times, discharges very fetid. ℞. Saline mixture. ℞. Cal. gr. ij, jalap. grs. ij., nitr. pot. grs. vj, one every hour.

14th. Samuel Branson; better, slight change in the stools for the better. ℞. Cal. and aloes, repeated at night.

15th. Samuel Branson; bowels opened; stools look better.—℞. Submur. hyd. gr. x; stomach quiet; took nourishment.

16th. Samuel Branson; bowels well opened; rested well, mouth touched with the calomel; powders discontinued; mouth wash, alum, sage tea, and molasses.

17th. Samuel Branson; mouth sore; convalescing.

18th. Samuel Branson; still doing well.

19th. Samuel Branson; mouth very sore; some blood discharged; wash continued (sage tea, &c.) ℞. Acet. plumbi grs. xij, aqua ℥vj.

20th. Samuel Branson; mouth better; continued the wash; rice to-day.

21st. Samuel Branson; continuing to do well; mouth better.

22d. Samuel Branson; mouth better; continuing to improve.

23d. Improving.

24th. Continuing to improve.

25th. Continuing to improve.

26th. Improving.

27th. Convalescing.

28th. Convalescent.

August 13th. Sarah Branson, æt 25, Ruxton lane. Complained of sickness and pain of the stomach; bowels constipated; took pil. calomel and aloes; repeated in 4 hours.

13th. Bowels opened several times; discharges bilious; sickness and pain of the stomach gone; complained of slight headach early in the afternoon; headach removed towards evening; much better.

14th. Convalescent.

15th. Complains slightly of headach. ℞. Submur. hyd. gr. x.

16th. Convalescent.

August 13th. Mary Macgotten, æt 35, (watchhouse Paca st.) Intoxicated when brought in; spasms of the stomach; sinapism applied to the epigastrium. ℞. Calomel gr. xv, which operated well, bringing away much bile; nerves much affected, for which an anodyne with brandy was given. Saline mixture, a table spoonful to be taken every 2 hours, with an additional quantity of tinct. opii.

14th. Tongue furred; nerves much affected. ℞. Pil. calomel and aloes; repeated. ℞. Tinct. gentiana and brandy and water.

15th. Left the hospital very early in the morning; returned with some whiskey; had been drinking; Mania à Potu. Tinct. opii ʒj, brandy every three hours; towards evening very noisy. ℞. Pulv. opii grs. ij; brandy; was compelled to put her in a cell.

16th. Still very delirious. ℞. Tinct. opii ʒj; whiskey every three hours. ℞. Pulv. opii grs. ij, at night.

17th. Slept some through the day; much better. ℞. Pulv. opii grs. ij.

18th. Improved; more quiet. ℞. Pulv. opii.

19th. Discharged.

August 13th. Eliza Ross, æt 23, French alley. Vomiting and purging since Wednesday morning; the discharges resembling rice water; cramps in the legs—before entering the hospital, had been prescribed for before coming here—on entering, complained of spasms in the epigastrium; sinapism applied; saline mixture. ℞. Submur. hydg. grs. xv, operated well. ℞. Pil. calomel and aloes.

14th. Bowels not opened, took calomel grs. xv, calomel grs. x.

15th. Much improved; convalescent..

16th. Slightly delirious. ℞. Emp. epis. to the back of the neck.

17th. Much improved; delirium nearly removed; urinated through the day.

18th. Urinated and had a passage today; convalescing.

19th. Convalescing.

20th. Convalescing.

21st. Continuing to do well.

22d. Convalescent.

24th. Discharged.

August 13th. John Miller, æt 24, French alley. Bowels much disturbed; stomach had been affected before entering.—℞. Pulv. rhei gr. xxv, opii ¼ gr.; stomach bilious; pulse weak, tongue slightly furred.

14th. Much better; nourishment.

15th. Convalescent.

Aug. 13th. Clementina Murphy, æt 32, was found in a field near the hospital. On entering, complained of spasms of the stomach; sinapism applied. ℞. Submur. hyd. gr. xv, opii gr. ss. ℞. Calomel and aloes.

14th. Bowels not opened. ℞. Submur. hyd ℈j; six hours after took calomel grs. x; bowels opened, stools bilious; broth at night.

15th. Complained of pain in the side, for which an epispastic was applied, relieved; bowels not opened; pulse weaker.—℞. Calomel and camph. grs. ana ij.

16th. Mouth sore; bowels open, bilious. ℞. Mouth wash; convalescing.

17th. Mouth sore; wash.

18th. Continue the mouth wash.

19th. Mouth wash continued; mouth better.

20th. Mouth better.

22d. Stomach very irritable; extremities and tongue cold.—℞. Tinct. kino ℥j, tinct. opii gtt. x, to be taken every hour—Effervescing mixture, pulv. opii gr. ij. ℞. Acet. plumbi gr. iij, opii gr. ss., one every hour.

23d. Stomach still very irritable; extremities cold—Effervescing mixture, tinct. kino and laudanum, as before. ℞. Acet. plumbi and opium.

24th. Stomach still irritable, but more quiet than yesterday. ℞. Brandy to day.

25th. Pulse very weak; complains of pain in the stomach; much worse in every respect.

26th. Died this morning between 7 and 8 o'clock.

August 14th. James McBride, æt 23, Light, near Pratt st. Taken with vomiting and purging resembling rice water; tongue furred; pain in the head; spasm of the stomach; sinapisms applied to the epigastrium. ℞. Pil. calomel and aloes; bowels very much opened—no improvement in the passages; vomiting ceased, the saline emetic was used, but produced no change.—℞. Saline mixture. ℞. Pil. calomel and aloes; saturated solution of mur. sodæ. ℞. Calomel grs. x.

15th. Stomach still irritable; bowels towards evening slightly improved. Mixture and powders as yesterday.

16th. Stomach still irritable; passages look better. ℞. Effervescing mixture. ℞. Submur. hydg. gr. iij, opii gr. ss., one every 3 hours.

17th. Passages better; stomach still a little irritable—Effervescing mixture; powders continued through the day every four hours, as yesterday evening. ℞. Submur. hydr. and aloes, every 2 hours.

18th. Stomach still irritable—Effervescing mixture every 3 hours; bowels opened but once to-day; passage small but bilious; symptoms of ileus—injections. ℞. Pulv. opii gr. iij—pulse good; surface pleasant.

19th. Stomach quiet; mouth sore; bowels opened; passages improved; pulse good; mouth better—Effervescing mixture.

20th. Mouth rather better, wash; bowels open; stomach quiet.

21st. Continuing to do well; mouth better.

22d. Continuing to improve.

23d. Improving. 24th. Continuing to improve. 25th. Continuing to improve. 26th. Improving. 27th. Convalescent.—

14th. John Branson. In the house with his mother. Dysentery. Recipe—Ol. ricini ℥ss.

14th. Richard Holliday, æt 50, Smith's wharf. Vomiting and purging similar to rice water. The muriate of soda emetic had been given before entering the hospital; saline mixture every hour. ℞. Calomel, camphor and ammonia 5 grs. each to be taken every hour. When he entered the hospital was nearly pulseless; extremities cold; tongue cold; came in after 1 at noon; venesection was performed; about 12 ounces of very dark thick blood was taken away; he died ½ before 6.

14th. Christian Howard, æt 50, French alley. Vomiting and purging, bilious (green) matter; cramp in the extremities; tongue furred. ℞. Calomel and aloes, repeated.

15th. Cramps relieved; bowels not opened. ℞. Calomel grs. x every hour for 2 hours. ℞. Ol. santon., ol. ricin. ana ℥ij, cal. and nit. potass.; bowels opened; stools dark.

16th. Complains of nausea; bowels opened; stools bilious; pulse intermitted in the morning; regular in the afternoon; urine passed through the day. Effervescing mixture.

17th. Mouth sore; wash—mixture saline—bowels confined; enema, which acted well; stool bilious.

18th. Mouth wash continued; saline mixture; bowels opened; urinated.

19th. Mouth better; urinated; bowels opened; wash for the mouth. Effervescing mixture.

20th. Mouth better; convalescing.

22d. Mouth better; continues to improve.

23d. Improving. 24th. Continuing to improve.

25th. Continuing to improve. 26th. Improving.

27th. Improving; mouth better. 28th. Mouth better.

14th. Richard Lee, æt 49, —— Hill. Eat cucumbers last night. Purging and cramps this morning; discharges similar to rice water; tongue furred; sinapism to the epigastrium had been applied before coming in; pulse good. Had taken an emetic—does not know what was the nature of what he threw up.—

℞. Calomel, grs. x every hour, until the bowels be opened—saturated solution of muriate of soda; saline mixture.

15th. Rested well last night; better; powders continued as yesterday; stools bilious; took nourishment.

16th. Convalescing; bowels open.

18th. Relapsed this morning at 3 o'clock; tongue and surface throughout cold; clammy sweat; pulse very feeble—had eaten some bread yesterday, which caused it. Sinapism to the epigastrium, saline mixture, tinct. cantharides ʒij every 2 hours for 3 hours; sinking.

19th. Died this morning ¼ past 3. On examination of the body—The lungs natural, the heart more firm, than on any previous examination; some blood in both ventricles, of a black color; liver not so pale as in others; gall bladder distended with green bile; stomach very much congested with reddish matter in it; intestines very much congested, with a little bile in them; bladder contracted.

14th. Francis Johnson, æt 12, French alley. Was found at 7 o'clock, lying in the park—had been there since morning.—Vomiting and purging, resembling rice water; had eaten yesterday cucumbers. ℞. Saline mixture every hour; calomel grs. x, which was thrown up, repeated in one hour.

We should have mentioned that when brought in he was perfectly cold; tongue as cold as ice—had been eating all day while in the park, sheep sorrel; pulse barely perceptible.

15th. Rather better; extremities warmer; stomach still irritable—mixture. ℞. Ol. terebin. and ol. ricini, every hour.

16th. Better this morning; passages improved; pulse good; urine secreted. ℞. Ol. terebinthinæ, ol. ricini ana ʒij, every 4 hours. ℞. Tinct, cantharides ʒj every 4 hours.

17th. Improved; urinated this morning. ℞. Calomel grs. v, pulv. nit. potassæ grs. vi—once every 3 hours. Tinct. cantharides ʒj, every 2 hours, stools improved.

18th. Urinated this morning. Effervescing mixture continued. Powders as before; tinct. cantharides ʒj, every 2 hours. Stomach irritable through the day slightly; bowels opened this morning, bilious; in the morning about 11 o'clock found his pulse very weak and less natural than it had been earlier in the morning; surface throughout cold; in 5 minutes after found his skin pleasant and pulse good.

19th. Urinated this morning; bowels opened; stomach quiet. Frequently through the day there is a change in his pulse, at times being weak, and in a few minutes rising without any thing being given for that purpose. Effervescing mixture. Powders as before.

20th. Bowels not opened; urinated. ℞. Calomel grs. vj, and repeated. Effervescing mixture.

21st. Urinated through the day; bowels opened; improving. Effervescing mixture.

22d. Continuing to improve.

23d. Discharged himself.

15th. James Brown, æt 50, Ruxton lane. Eat some water-melon yesterday—was taken at 10 o'clock yesterday morning; cramps of the stomach; vomiting and purging; nearly pulseless; tongue cool—had taken yesterday about 12 o'clock, a dose castor oil—after entering took saline mixture. ℞. Submur. hydr. grs. xx, opii grs. ij. Died at 25 minutes of 10 o'clock—about 3 quarters of an hour after entering the hospital.

15th. Margaret Woodyear, æt 28, Grant street. Was taken sick on Sunday morning with cramps in the stomach and legs; vomiting and purging, resembling rice water—Mur. sodæ and warm water had been given by doctor Thomas—produced a change—what she threw up before coming in, was greenish—stools yellow. ℞. Saline mixture. ℞. Calomel grs. x, repeated, one every 2 hours.

16th. Tongue furred, bowels had been opened, stools bilious, breathing oppressed. ℞. Tinct. cantharides ʒj—every 2 hours took one dose. Effervescing mixture every hour—immediately after taking the cantharides, she had a very severe spasm, and died a few minutes afterwards—No urine had been secreted.

16th. Andrew Schreck, æt 80, corner Lombard and Light. Bowels affected before entering—had been eating green apples; tongue cold; nearly pulseless—could obtain no information from him—refused to take any thing before coming into the hospital, and afterwards—breathing oppressed—Of intemperate habits. Died about 6 in the evening. Mind affected,—stated that nothing was the matter with him; mentioned that he was 54 years of age, when he was 80. On examination of his body, the following is a just account—The nails of the fingers and toes were purple, the skin very much corrugated, the lungs somewhat congested; in the heart there was found a small quantity of dark liquid blood—liver pale; in the stomach there was a quantity of the rice water; the intestines congested, the kidneys natural in appearance; not a particle of urine; no urinous smell about them; slight traces of black motling of the stomach.

17th. George Shumacker æt 24, Barre street. Has been in this country about four weeks, during which time his bowels have been slightly affected; became overheated yesterday at work—drank a quantity of water—was taken with vomiting and purging (rice water)—had eaten nothing improper—had been prescribed for by doctor Roberts,—sinapism to the stomach, and

calomel and laudanum. Cramps of the legs; oppression at the precordium, which was relieved by the sinapism—urinated freely this day. ℞. Mixture saline. ℞. Calomel grs. xij—nit. potassæ grs. vi—one every 2 hours—the mixture every hour.

18th. Rested well to-day; quite easy through the day; stomach quiet; urinated freely; mixture saline; powders continued every 3 hours.

19th. Rested well through the night; tongue furred; bowels not opened; urinated freely. ℞. Ol. ricini ℥ij, which operated well; stools bilious.

20th. Convalescing; bowels opened this morning, and urinated.

21st. Convalescing. 22d. Discharged.

17th. Mr. West, æt 54, Camden and Light sts. Had eaten yesterday 3 or 4 watermelons, and a quantity of corn—was taken at 3 o'clock this morning, with vomiting and purging (rice water); cramps of the extremities; urinated this morning freely; tongue cool and furred; pulse weak; feet and hands cold—had been prescribed for by doctor Hintze. ℞. Calomel grs. xx, opium grs. iij—after entering took saline mixture every hour.—℞. Calomel grs. x, opium gr. ss., nit. potas. vi grs—one every 2 hours; sinapism to the stomach.

19th. Rather better to-day; very slight improvement in the pulse; skin better; bowels opened; stools improved; urinated this morning; tongue warmer—Powders continued. Tinct. cantharides ℥j every 2 hours.

20th. Better to-day; bowels open by calomel gr. vj; more quiet. Tinct. cantharides ℥j every 3 hours.

21st. Delirious through the night, and very restless—relapsed to-day—tongue and extremities cold; pulseless—and was kept in bed with difficulty.

22d. Delirious through the night—and died about 2 o'clock in the morning. Dissection discovered the vessels of the inner coat of the stomach and intestines to be much injected; and, also, the brain much congested.

17th. Ann Lerew, æt 23, Ruxton street. Has been complaining of acute rheumatism for 4 months—purging since yesterday—has eaten nothing improper; cramps last night in the legs; passages green, pulse good; tongue furred; urinated this morning, urine of a reddish color. ℞. Mixture saline.—℞. Calomel grs. x, nit. potassæ vi grs. in the evening.—℞. Nit. potas. grs. vi, calomel grs. vi—one every 3 hours.

18th. Powder given again this morning; bowels very much acted upon. ℞. Spr. nit. dulc. ℥iss, tinct. opii ℥ss—a tea spoonful every hour..

19th. Bowels still acted upon, but complains of pain in going to stool. Stomach more quiet; urinated—laid aside the spr. nit. dulc., and tinct. opii, on account of its producing sickness at the stomach. ℞ Opium grs. ij. Effervescing mixture throughout the day.

20th. Better to-day; bowels opened by cal. grs. vj—Tinct. cantharides ʒj every 3 hours.

21st. Complained very much through the day—discovered in the afternoon, that she is pregnant—child delivered, not so well afterwards.

22d. Pulse feeble; breathing oppressed. ℞ Kino. grs. iij., opium gr. ss., one every hour.

23d. Pulse very feeble; breathing very difficult.

24th. Died this morning between 10 and 11 o'clock.

18th. Thomas Lerew, æt 20, Light street. Had eaten some watermelon yesterday—was taken this morning with trembling, and sickness at the stomach—what he vomited was yellow—that passed by stool, was black; vomited on his way to the hospital, tasted very bitter—is in the habit of getting intoxicated; subject to fits, had one this morning before coming in—took before entering the hospital, a dose of calomel and jalap. ℞ Mixture saline. ℞ Calomel grs. viij—aloes grs. vj—misce.

19th. Powders had operated; stools bilious—much improved; powders continued.

20th. Convalescent.

19th. Mary Briell, æt 50, Light street. Was taken yesterday with bowel complaint, and this morning with vomiting—cramps this morning in the legs; pulse small; tongue cool and furred—has eaten nothing improper—had taken early in the morning a dose of castor oil—and just before entering, took some port wine; sinapism to the stomach—A vein of the arm was opened and about 7 ounces of blood was taken away.—Mur. of soda emetic was administered—threw up several times; some of the Port wine was discharged each time—afterwards the cold mur. of soda was given, which continued to produce vomiting. ℞ Calomel grs. x—pulv. opii gr. ss. m.—to be taken every hour—cupping was tried— the cups raised the skin well, but no blood could be obtained.

20th. Died about 12 last night.

19th. Sarah Sharp, æt 31, Lombard street. Had eaten watermelon on Thursday. Bowels affected for 4 weeks—sometimes slimy, afterwards yellow—was taken ill on Thursday with vomiting and purging—that thrown up, bitter and yellow,—and that thrown up this morning was green; stools yellow; cramps of the legs; pulseless; tongue furred and cold; extremities cold—Mix-

ture saline—About 5 ounces of blood was taken from the arm—Saline emetic; threw up once. Continued to fail, and died about 3 o'clock.

19th. Ann Mosher, æt 50, Ellicott street. Had eaten apples and watermelon yesterday—was taken last evening with vomiting and purging; slimy discharges from the bowels; stools frequent; pulse good; tongue warm; slight cramps of the legs. Habit of drinking. ℞ Mixture. ℞ Calomel grs. vj., pulv. opii gr. ¼ m., one every 3 hours—No discharge either from the stomach or bowels, after coming in, until 8 o'clock in the evening.

20th. Powders acted well; much better.

21st. Convalescing; bowels opened.

20th. Wm. Mathews, æt 45, Gallows Hill. Was found in Mrs. Chambers' rope walk—had been eating *green corn*—was taken with vomiting and purging last night—cramps of the legs; tongue cold; pulseless. ℞ Mixture—Tinct. cantharides ℥ij, every hour—calomel grs. xv., pulv. opii grs. iij—has not urinated since yesterday morning. ℞ Calomel grs. vj., pulv. opii gr. ½ m. Died 3 hours after coming in.

20th. Francis McCann, æt 28, Light street. Had eaten nothing improper—came from Philadelphia on Thursday—was taken with purging this morning—stools watery—took some water this morning, which he threw up—cramps of the legs and fingers; tenderness of the epigastrium; slight pain of the head; pulse weak; tongue furred—vomited since coming in (bilious). Venesectio ad ℥viij. ℞ Calomel grs. vj., pulv. opii ¼ every 2 hours; injection; bowels opened by it.

21st. Powders continued through the night. Died at eight o'clock.

20th. John Riley, æt 32, York road. Was taken with vomiting and purging about 2 o'clock this morning—eat apples yesterday, and a great quantity of watermelon last night—had felt a slight uneasiness in his bowels for 4 or 5 weeks; slimy discharges before coming in—after he entered the hospital, vomiting and purging (rice water). ℞ Muriate soda emetic. ℞ Calomel grs. x., pulv. opii grs. ½—afterwards cal. gr. vj, every 2 hours; bowels opened; stools bilious; pulse good; skin pleasant.

21st. Convalescing. Bowels opened through the day.—℞ Calomel and aloes, every 4 hours.

22d. Convalescent.

20th. Philip Taylor, æt 20, Tyson alley. Vomiting of yellow matter; bowels opened twice this morning—eat largely of watermelon yesterday—Habit of getting intoxicated—had a fit this morning before coming in, and one afterwards—pain in the head; pulse good; tongue furred; head relieved, after a while.—

℞ Calomel grs. x., pulv. opii gr. ss. m. ℞ Calomel grs. vi., aloes grs. vi. m., one every 2 hours.

21st. Mania à Potu. ℞ Pulv. opii grs. ij—repetatur.—Confined in a cell.

22d. Confined in the cell, injured his face by striking himself against the walls.

23d. Died this morning—body not examined.

20th. Mrs. Miller, æt 50. In the house was acting as nurse; had diarrhea yesterday, but said nothing about it—was found this morning in a collapsed state; extremities cold; tongue cold; skin of the fingers corrugated; nails purple. ℞ Saline mixture.—℞ Calomel grs. x, pulv. opii gr. ss. m. Spasms of the legs—Died about 4 o'clock.

21st. James Brooks, æt 42, Long alley. Bowels affected for 4 weeks—Habit of drinking—had eaten yesterday a quantity of *corn, cantelope* and *apples*—Vomiting and purging (rice water); cramps of the legs, arms, and stomach; tongue purple and cold; extremities cold; pulseless; voice husky—Sinapism to the epigastrium—saline mixture. ℞ Calomel grs. x, pulv. opii gr. j. m., one every 2 hours. Tinct. cantharides ʒij, every hour. Died 7 hours after coming in. Spasmodic affection of the muscles after death for half an hour.

21st. Catharine Holbrook, æt 40, Long alley. Had eaten yesterday, corn and cantelopes—was taken with vomiting and purging (rice water); cramps of the hands and legs; tongue purple and cold; extremities cold; pulseless—bowels affected for some time. ℞ Saline mixture—calomel grs. x., pulv. opii gr. j. m., one every 2 hours—Sinapism to the epigastrium and legs.

22d. Died this morning at 8 o'clock.

21st. Martha Pitt, æt 28, Busy alley. Was taken this morning with vomiting and purging (rice water)—Does not know whether any thing improper had been eaten—pulse gone; extremities gone. Died 5 minutes after coming in.

21st. Mrs. McCready, æt 45, Hillen street. Was brought here this morning at 1 o'clock, from the *Watch house*—In the habit of getting intoxicated—in that state when brought in—was taken with vomiting and purging (rice water); cramps of the stomach and legs; tongue and extremities cold; skin of the hands corrugated—had taken some camphor before coming in. ℞ Saline mixture, every hour. ℞ Calomel and opii grs. x, and 1 m., one every 2 hours—Sinapism to the stomach—bowels had been affected for several days. Died in the evening.

21st. John Donahoe, æt 30, Camden and Light streets. Eat some apples to day—cramps of the stomach, arms and legs—hands and feet cold—In the habit of drinking—Vomiting and purging to day at 10 o'clock (rice water). Had been bled be-

fore coming in. Salt emetic—saline mixture, tinct. cantharides ℥ij, x grs. calomel and 2 of opium, every 2 hours.

22d. Pulseless—extremities cold; hands purple. ℞ Submur. hydr. grs. x, pulv. opii gr. ss. m., one every hour—Saline mixture—Tinct. cantharides ℥ij, every hour. Died at ½ past 8.

23d. Eliza Miller, æt 23, Ross street. Eat some cantelope and corn yesterday—was taken yesterday afternoon with vomiting and purging (rice water)—cramps of the arms, legs and stomach; pulse very weak; tongue furred and cold—In the habit of getting intoxicated. ℞ Saline mixture, sinapism to the stomach, calomel grs. x, opium grs. 1 m., one every hour—Tinct. cantharides ℥ij, every hour.

24th. Stomach very irritable; spasms severe; pulse very feeble; tongue much furred and cool—had a fit this evening—Saline mixture. ℞ Calomel grs. x, opium gr. i, m., every hour—Tinct. cantharides.

25th. Very restless—hiccup occasionally, which has not been found in any other case—pulse barely perceptible, through the greater part of the day—was rather better in the morning, but changed about the middle of the day for the worse.

26th. Rather better to day; pulse better. ℞ Calomel grs. vj, aloes grs. v, one every two hours—Saline mixture every hour.

27th. Not so well—tunica conjunctiva inflamed. ℞ Saline mixture every hour. ℞ Calomel and aloes—but will not take the medicines but rarely. Had a fit to day—Enema, saline.

28th. Died this morning between 9 and 10 o'clock.

23d. Mary Bias, æt 30, Uhler's alley. Had eaten nothing improper—taken yesterday with vomiting and purging; spasms of the hands and legs; tongue cold; pulseless; skin of the fingers corrugated—Sinapism to the stomach, saline mixture, calomel grs. x, opium grs. j., one every hour. Died at 7 o'clock.

23d. Julia Gorman, æt 15, Light and Ruxton streets. Was taken on Sunday morning with vomiting and purging (rice water); spasms of the legs and stomach—had been bled by doctor Lloyd, and had taken ol. ricini and ol. terebinth, afterwards calomel and camphor—Passages improved, but the bowels very much acted upon, from the irregular manner by which the medicines had been given. Just before coming in, an anodyne enema had been administered, and for one or two nights previous; stomach irritable—Sinapism to the epigastrium. ℞ Saline mixture every hour. ℞ Spt. nit. dulc. ℥j, tinct. opii gtt. x, to be repeated every hour.

24th. Bowels improved; slept well last night. ℞ Spts. nit. dulc. ℥j, tinct. opii gtt. x, every 2 hours—Saline mixture.

25th. Improving. ℞ Saline mixture every two hours—urinated.

26th. Improving—urinated. ℞ Saline mixture every two hours.

27th. Much better; saline mixture every two hours.

28th. Better; saline mixture every 2 hours.

29th. Convalescing—Saline mixture every 3 hours.

30th. Convalescent.

23d. Hall Britton, æt 30, Federal Hill. Was taken on Monday night at 12 o'clock, with purging and vomiting (rice water); had eaten some apples and cabbage last Monday—had been prescribed for by doctor Briscoe. Calomel, opium and camphor; blisters applied to the epigastrium and legs—that on the epigastrium acted well—spasms of the legs and stomach; tongue cool and furred; hands and feet cold; pulse small—has passed no urine for 2 or 3 days—shows a disposition to do so, but cannot pass any—breathing oppressed very much.

24th. Rested well during the night; extremities still cold; pulse rather better; bowels opened in the morning; passed no urine this day. ℞ Calomel grs. v, sulph. quinine grs. iij, one pill every 2 hours.

25th. Rested well during the night—extremities not so cold; tongue cleaner; bowels opened; pulse better—urinated twice this afternoon. ℞ Submur. hyd. grs. v, nit. potass. grs. vj, one every 2 hours—in the evening, ℞ nit. potass. grs. v, every 2 hours.

26th. Bowels open; urinated through the day—slight excitement of the pulse in the afternoon. ℞ Nitrat Potass. grs. v, every hour.

27th. Pulse excited; urinated through the day. ℞ Ol. ricini ℥ij. ℞ Nitrat potass. ℈ij, gum arabic ℥ij, aquæ ℥vj, a table spoonful every 2 hours.

28th. Much better; bowels opened; urinated; pulse good; tongue clean. ℞ Nitre mixture every 2 hours.

29th. Convalescing. Nitre mixture every 3 hours.

30th. Convalescing. Nitre mixture.

31st. Convalescing.

Sept. 1st. Discharged.

August 23d. Cornelius McManus, æt 32, was found lying in the Park (Howard) and sent here. Had eaten watermelon, corn, and damsons—taken this afternoon, vomiting and purging (rice water); cramps of the legs and hands; hands and legs cold; tongue cold; pulseless; skin of the hands corrugated; breathing oppressed; voice husky. Died precisely one hour after coming into the hospital.

24th. Eliza Mocans, æt 38, Charles street. Was taken last night with vomiting and purging—discharges yellow—had eaten nothing improper—In the habit of drinking—cramps of the hand and legs; pulse very weak; tongue furred and cold.—℞ Saline mixture. ℞ Submur. hyd. grs. x, opium gr. j, one every hour—Tinct. cantharid. ʒij, every hour. Died 3 hours after coming in.

24th. Eliza Jackson, æt 35, Lee street. Eaten nothing improper—taken this morning with vomiting and purging—spasms of the stomach, arms and legs; extremities cold; pulse very weak; tongue cold and purple—In the habit of drinking—urinated this morning—had taken a powder, supposed to be calomel, before coming in—in the afternoon had spasms of the occipito-frontalis muscle—was found holding by the side of the bed: said her reason for so doing was, that she feared falling out. ℞ Saline mixture. ℞ Submur. hydr. grs. x, opii grs. v. m., one every hour—Pulv. opii grs. ij, tinct. cantharid. ʒij every 2 hours.

25th. Died this morning. On examination of the body, the following is a just account: The lungs nearly natural; in both ventricles of the heart, there was found some very dark blood—the liver not so pale as in other bodies examined—a small quantity of blood was found in it; the gall bladder distended; the stomach and intestines not as much congested as in other cases—in the spleen there was found some dark blood; the bladder contracted to the size of a walnut.

24th. Catharine McGuire, æt 36, Light street. Was taken on Monday morning with vomiting and purging—had eaten nothing improper—discharges (rice water)—has been under the care of doctor Lloyd; vomited to day of a greenish color; bowels acted upon; took a pill just before coming out, but knows not what it was; pulse rather weak; tongue moist and furred.—℞ Saline mixture. ℞ Calomel grs. 6, aloes 5 m. every three hours.

25th. Improving. ℞ Calomel grs. 6, aloes grs. v, one powder every 3 hours—Saline mixture through the day, but laid aside in the evening; she complained it gave her the heart-burn. ℞ Cal. grs. iij, nit. potas. grs. 8 m., one powder every 4 hours. ℞ Nit. potas. grs. v, one powder every two hours—bowels opened; stools bilious; urinated through the day.

26th. Improving—Tongue clean; bowels open; urinated.—℞ Effervescing mixture every hour.

27th. Improving—Tongue clean; bowels open; urinated.—℞ Saline mixture every two hours. ℞ Calomel grs. vj, nit. potas. grs. v. m., one every 3 hours.

28th. Better; tongue cleaner; urinated. ℞ Ol. ricini ℥ij, which operated well.

29th. Convalescing. 30th. Convalescing. ℞ Ol. ricini ℥ij. 31st. Convalescing. September 1st. Discharged.

24th. Isabella Robinson, æt 24, Howard and Conway streets. Bowels affected for the last 2 weeks—was taken last Thursday with vomiting and purging—first green, then watery—stools at present slimy—tongue very red—pulse pretty good—when first taken, had spasms of the hands: but not lately. ℞ Saline mixture. ℞ Submur. hydr. grs. viij, one every 2 hours—Saline mixture every hour—In the evening complained of a pain in the breast and side.

25th. Mouth affected by mercury, taken prior to coming in. ℞ Ol. ricini ℥iss, acted well; urinated through the day.

26th. ℞ Saline mixture, every two hours.

27th. ℞ Saline mixture every hour. 28th. Mouth better. ℞ Saline mixture every two hours.

29th. Improving; mouth better. ℞ Saline mixture.

30th. Improving; mouth better—saline mixture. ℞ Spts. nit. dulc. ℥j, every two hours.

31st. Improving; mouth better. ℞ Saline mixture. ℞ Spts. nit. dulc. ℥j, every two hours.

Sept. 1st. Improving. 2d. Improving. ℞ Tinct. gentiana thrice a day.

3d. Improving slowly—Tinct. gentiana continued.

4th. Improving—mouth rather better. ℞ Tinct. gentiana continued as mouth wash; elixir vitril.

5th. Improving; mouth rather better. ℞ Tinct. gentiana mouth wash continued; urinated; bowels opened.

6th. The same as yesterday—Tinct. gentiana continued.

7th. Pulse rather better; tongue very red; complained of the tinct. gentiana hurting her mouth. ℞ Blue pil. mass. gr. 1, rhei. gr. ij, aloes gr. j. m., one powder every two hours.

8th. Pulse very feeble; tongue still very red; skin dry; mouth very sore; bowels very free; urinated. ℞ Powders as yesterday. ℞ Spts. nit. dulc. ℥j, tinct. opii gtt. x. m., three times a day—Enema anodyne. ℞ Pulv. opii gr. ij, to be taken immediately.

9th. Died this afternoon about 10 minutes before 4 o'clock.

25th. Ellen Hackett, æt —, Sharp and Hill streets. Brought in in a state of coma, could not be roused to answer any question, cannot take any remedy; pulse pretty good, but the arms nearly useless: when raised, they fall down as after death; the lip, if depressed, remained so—was not able to get any history of her case.

26th. In the same state as yesterday. ℞ Saline mixture.—℞ Tinct. cantharides ʒij, every hour. ℞ Ol. terebinth ʒij, every two hours—Enema of ol. terebinth.

27th. Died this morning.

26th. Jane E. Small, (Bank street). Was taken last Wednesday night with cramps of the stomach, hands and feet—felt nothing of the kind since—had eaten nothing improper—complains now of a pain in the temples; the bowels much acted upon since; stomach irritable; passages yellow; tongue warm and furred—Had taken, prior to coming in, the lobelia and cayenne pepper—urinated through the day. ℞ Saline mixture every hour. ℞ Calomel gr. v, nit. potas. gr. 6. m., one every two hours.

27th. Stomach still irritable; urinated; bowels opened; passages yellow. ℞ Effervescing mixture every hour. ℞ Calomel gr. xxxv, ft. pil. vj, one every two hours. ℞ Nit. potas. ℈ij, gum. mimo. nilot. ʒij, aqua font. ℥vj. m., a table spoonful every hour in the evening—Saline mixture occasionally.

28th. Complained in the afternoon of a weight at the stomach; vomited up some bilious matter, which relieved her—stomach quiet through the day; pulse better; tongue moist and rather cleaner; urinated. ℞ Saline mixture every two hours—Pills as before, every two hours—nitre mixture every hour.

29th. Better—mouth slightly affected by mercury—pulse better—tongue cleaner—urinated. ℞ Effervescing mixture.—℞ Nitre mixture every two hours.

30th. Improving; stomach quiet; pulse better; tongue cleaner; urinated through the day. ℞ Pills as before. ℞ Nitre mixture every two hours.

31st. Convalescing—tongue cleaner—pulse good—bowels open; urinated. ℞ Nitre mixture.

Sept. 1st. Discharged.

28th. Cena Thomas, æt 35, Lombard street. Was taken on Friday with the bowel complaint; vomited yesterday and this morning before coming in, which was what she drank—stomach quiet since coming in—tongue furred; pulse weak; passages yellow; urinated this morning—blister applied to the stomach—and had taken some pills from doctor Lloyd.—℞ Saline mixture every hour. ℞ Submur. hydr. gr. iv, nitrat. potas. vj, one powder every two hours.

29th. Stomach quiet; tongue furred; pulse improved; urinated this afternoon, but not this morning. ℞ Enema twice, but the bowels not opened—Powders continued as yesterday—Saline mixture every two hours.

30th. Better; pulse better; tongue still furred; bowels opened;

urinated. ℞ Powders as yesterday—Saline mixture every 3 hours.

31st. Convalescing—Powders as before—Saline mixture.

September 1. Convalescing. 2d. Convalescing. 3d. Convalescing. 4th. Convalescing. 5th. Convalescing. 6th. Convalescing. 7th. Convalescent.

28th. James Steinwitz, æt 30. Howard and Mulberry sts. Eat a crab and some cabbage about 10 days past; two days after, his bowels became affected—passages green; has not complained of sickness of the stomach, nor spasms; pulse feeble; tongue clean when he came in, but slightly furred in the evening; urinated through the day. ℞ Saline mixture every two hours.—℞ Calomel grs. vj, nit. potas. grs. vj. m., one powder to be taken every two hours.

29th. Pulse better; tongue cleaner; urinated through the day; bowels opened, passages bilious. ℞ Saline mixture every 2 hours—powders as before.

30th. Pulse better; tongue cleaner; urinated freely through the day. ℞ Saline mixture and powders every 3 hours, continued; rested well last night.

31st. Convalescing. September 1st. Convalescent.

2d. Convalescent. 3d. Convalescent.

29th. Eliza Bond, æt 22, Union street. Was taken last night with vomiting and purging (rice water)—had eaten apples and fish—spasms of the stomach, arms and legs—pulse just perceptible; tongue moderately warm and furred; urinated last night, but not since. ℞ Saline mixture every hour. ℞ Calomel grs. viij, nitre grs. vj. m., one every hour—Tinct. cantharides 2 tea spoonsful every hour, for 3 doses: then one tea spoonful every hour.

30th. Eliza Bond—Died this morning about four o'clock.—Found the lungs flaccid; the heart small, some dark blood in the ventricles; the liver pale; gall bladder nearly empty; stomach congested—the intestines slightly so.

29th. Mary Riley, æt 18, Mill street: but found in the Park. Eat some green apples and cantelopes this morning, and drank some small beer—had a fit before coming in, and prior to be taken with the spasms of the stomach—Vomited before coming in, and threw up some of the apples—pulse full and frequent; tongue slightly furred—Fiat venesectio ad ℥xx, which relieved the spasms. ℞ Mur. of soda emetic, which caused her to throw up some of the apples. ℞ Calomel grs. x, pulv. opii grs. j. m. ℞ Calomel grs. viij, nitrat potas. grs. vj. m., one every hour.

30th. Much better to day—ran away this afternoon.

30th. Wm. Slater, æt 57, Light street. Had eaten an apple or pear yesterday—Taken with vomiting and purging last night, (rice water)—spasms of the legs—In the habit of drinking—pulse very feeble and frequent; tongue furred, purple and cold; cold clammy sweat; urinated this morning. ℞ Saline mixture every hour. ℞ Calomel grs. x, opii gr. i. m. ℞ Calomel grs. viij, nitras potas. gr. v. m., one every hour.

31st. Died this morning about 3 o'clock.

30th. Thomas Lucas, æt 46—was found in a cellar opposite the depot of the Susquehanna rail road, where he had been working. Had eaten nothing improper—was taken this morning about 11 o'clock with vomiting and purging (rice water)—spasms of the stomach and legs; pulse barely perceptible; tongue purple and cold; extremities cold. ℞ Saline mixture every hour. ℞ Calomel grs. x, opii grs. j. m. ℞ Calomel grs. viij, nitras potas. gr. v. m., one every hour—Tinct. canthar. ʒj every hour. Died ½ before 2 o'clock.

30th. Lydia Brooks, æt 23, Barre street. Was taken with a cough two weeks ago—to day was taken with spasms of the stomach and vomiting—her dinner she threw up, composed of meat and potatoes—bowels very loose since yesterday—passages not noticed—no spasms when she entered; pulse good; tongue slightly furred and warm; urinated this day. ℞ Saline mixture every hour. ℞ Calomel grs. viij, nit. potas. grs. 6 m., one every 2 hours.

31st. Better; bowels opened; passages bilious; urinated; pulse good. ℞ Saline mixture every hour—Powders as before.

September 1st. Improving; bowels opened; urinated; tongue cleaner; pulse better—Saline mixture—Powders as before.

2d. Improving; bowels open; urinated; pulse better; tongue rather cleaner—Saline mixture and powders as before.

3d. Still improving; bowels opened; urinated; pulse better; tongue cleaner—Saline mixture and powders as yesterday.

4th. Continuing to improve; urinated freely; bowels opened; pulse better—Saline mixture.

5th. Continuing to improve. ℞ Senna, manna and salts, which acted well.

6th. Continuing to improve—Senna, manna and salts, continued every 2 hours; bowels opened; urinated.

7th. Continuing to improve; bowels open; urinated; tongue cleaner. ℞ Saline mixture.

8th. Improving; bowels had not been opened; urinated; pulse pretty good; tongue clean. ℞ Pulv. rhei grs. 2 s., which operated well.

9th. Much better; tongue cleaner; pulse good; bowels open; urinated. ℞ Powders as before—Saline mixture.

10th. Relapsed during the night; pulse very feeble; tongue cool; extremities cold. ℞ Saline mixture. ℞ Submur. hydr. grs. viij, pulv. opii gr. j., nitras potas. grs. v. m., one powder every hour; frictions with lard.

11th. Stomach very irritable; vomiting and purging (rice water); pulse very feeble; tongue cool; cold clammy sweat; extremities cold. ℞ Saline mixture. ℞ Calomel grs. viij, opii gr. j, nit. potas. grs. v, one every ½ hour and then every hour.

12th. Stomach still irritable; passages not so frequent, but (rice water); pulse a little better—Saline mixture—Pills as yesterday—skin on the abdomen very flaccid.

13th. Stomach still irritable; bowels not opened—matter ejected bilious; urinated; pulse rather better; tongue red and apthous. ℞ Pills as yesterday—Creta preparata mixture—enema.

14th. Stomach not so irritable as yesterday; bowels not opened; matter ejected bilious; urinated; pulse at times not perceptible, in a short time it becomes pretty good; tongue red and apthous. ℞ Chalk mixture. ℞ Pills as yesterday—enema.

15th. Stomach more quiet; matter ejected bilious; pulse good throughout the day; tongue a little better; bowels not opened—℞ Pills as before—Chalk mixture; rubbed with the lard.

16th. Rather better to day; tongue looks better; pulse good; stomach more quiet; bowels not opened. ℞ Pills às before—Chalk mixture. ℞ Nit. spts. dulc. ʒj—Tinct. opii gtt. v. m., every hour.

17th. Improved; pulse good; tongue better; urinated freely; stomach quiet; bowels opened by the enema, last night.—℞ Chalk mixture—Pills as before—Rubbed with the lard.

18th. Much improved; pulse better; tongue clean; urinated; bowels much acted upon. ℞ Chalk mixture; anodyne enema.

19th. Much better; tongue clean; bowels opened, urinated; pulse and skin good. ℞ Chalk mixture.

20th. Better to day; pulse pretty good; tongue clean; urinated; bowels open. ℞ Chalk mixture—Saline mixture every 2 hours—Ale sangaree 4 times a day; panada.

21st. Improving still. ℞ Chalk mixture—℞ Quinine mixture.

22d. Improved; pulse regular, but weak; tongue clean; bowels regular. ℞ Chalk mixture; quinine mixture.

23d. Bowels not open; pulse good; tongue clean; urinated. ℞ Chalk mixture every 2 hours; quinine mixture every 3 hours.

24th. Rather better to day; still feeble; tongue clean; bowels opened; urinated. ℞ Chalk mixture every 2 hours; quinine mixture every 2 hours.

25th. Pulse still feeble, &c. ℞ Quinine; chalk mixture.

26th. Better to day; pulse still feeble; tongue clean; urinated; bowels not opened—Enema.

27th. Better to day; chalk mixture; quinine mixture.

28th. Better to day; quinine mixture every 2 hours—Enema.

29th. Very much improved in every respect. ℞ Quinine mixture every 2 hours.

30th. Better to day. ℞ Quinine mixture; chalk mixture, each every 2 hours.

October 1st. Better to day. ℞ Chalk mixture; quinine mixture.

2d. Better to day. ℞ Chalk mixture every 2 hours; quinine mixture every 3 hours.

3d. Improving. ℞ Quinine mixture.

4th. Improving. ℞ Chalk mixture; quinine mixture every 2 hours.

5th. Improving. ℞ Chalk mixture; quinine mixture.

6th. Improving. ℞ Chalk mixture; quinine mixture.

7th. Improving. ℞ Chalk mixture; saline mixture.

8th. Improving. ℞ Chalk mixture.

9th. Still improving. ℞ Chalk mixture.

10th. Continuing to improve. ℞ Chalk mixture.

11th. Improving still. ℞ Chalk mixture.

12th. Improving. ℞ Chalk mixture.

13th. Still improving. ℞ Chalk mixture.

14th. Tongue rather red to day; pulse good; bowels bound. ℞ Blue pill mass v grs.; twice a day. ℞ Chalk mixture.

15th. Continuing to improve. ℞ Chalk mixture.

16th. Continuing to improve. ℞ Chalk mixture.

17th. Continuing to improve. ℞ Chalk mixture—Blue pill mass. grs. 5, twice a day.

18th. Continuing to improve. ℞ Chalk mixture—Blue pill mass. grs. 5.

19th. Continuing to improve. ℞ Chalk mixture. ℞ Rhubarb and aloes.

20th. Discharged.

30th. Harriet Herbert, æt 24, Fort Road. Complained of Dysentery for the last 7 weeks—Cough; pain in the breast; pulse feeble and quick; tongue furred; passages at present brown.—℞ Saline mixt. every hour.

31st. Still very feeble, but rather improved since yesterday; bowels opened. ℞ Saline mixture every hour. ℞ Calomel grs. iv., nitras potas. grs. 6 m., one every 4 hours.

Sept. 1st. Not so well; stomach irritable; bowels very free; hysterical fits; powders as before.

2d. In the same state as yesterday; powders as before.

3d. In the same state as yesterday; powders continued.

4th. Died at 12 o'clock.

30th. Thomas Neal, æt 46, Frog Town. Was taken to day with vomiting and purging (rice water); spasms of the legs and arms—eat some apples yesterday and one pear to day—Habit of drinking sometimes; pulse feeble; tongue furred and cold.—℞ Saline mixture. ℞ Calomel grs. viij, nitrat. potas. grs. v. m., one powder every hour.

31st. Died this morning about 4 o'clock.

30th. John Hall, æt 40, Ross street. Was taken yesterday morning with bowel complaint—this morning, vomiting and purging (rice water); eat some potatoes—Habit of drinking—spasms of the legs; pulse feeble; tongue cool and furred; urinated this morning: had taken 2 powders prior to coming in, and muriate of soda emetic. ℞ Saline mixture every hour. ℞ Submur. hydr. grs. viij, nitrat. potass. grs. vj. m., one powder every hour.

31st. Died this morning about 4 o'clock.

31st. Daniel Picket, æt 30, Light street. Was taken yesterday about dark with vomiting and purging (rice water)—spasms of the legs and arms; had eaten nothing improper; vomited and purged this morning; pulse barely perceptible; tongue purple and cold; hand and feet cold. ℞ Saline mixture.—℞ Calomel grs. x, opii gr. i. m. Died 4 hours after coming in.

31st. Caleb Gill, æt 20, Light street. Was taken yesterday about 12 o'clock with vomiting and purging (rice water); had eaten apples the day before yesterday; cramps of the legs and arms; pulse perceptible; tongue yellowish and furred; copious perspiration; spasms left him last night, but inclination to vomit; slight distress about the precordia. ℞ Saline mixture. ℞ Calomel grs. x, opii gr. j. m., one every hour for three hours.—℞ Calomel grs. viij, nitr. potas grs. vj. m., one every hour.

Sept. 1st. Not so well; stomach very irritable; pulse weaker; cramps continued, but not so severe as yesterday. ℞ Saline mixture—Powders as before—Enema at night, which operated slightly.

2d. In the same state as yesterday; stomach still irritable; saline mixture and powders as before—Enema at night, which operated slightly.

3d. In the same state; stomach irritable. ℞ Saline mixture; powders continued—Enema operated slightly.

4th. Died at 12 o'clock.

31st. Gracey Miller, æt 25, Saratoga street. Was taken this morning with purging, about 12 o'clock, whilst washing at the alms house: afterwards, at her request, was sent to town: they would not receive her there—was brought in pulseless; tongue

furred and cold; extremities cold; passages thin and watery; stated that she felt cold, a very uncommon remark. Died two hours and a half after coming in.

31st. Ann Watkins, æt 25, Saratoga st. Was also brought from the alms house, where she was taken to day about 12 o'clock, with purging (rice water); cramps of the legs—was sent in by her request: they would not receive her there—when brought in was pulseless; tongue purple and cold; extremities cold. Died 3 hours after coming in.

31st. George Dorsey, æt —, Run alley. Was brought, in an open cart—was just taken from the cart and put in a hand-barrow; and died in 5 minutes—Had not time to take him up stairs in the ward.

31st. Charles Moore, æt 27, just from Philadelphia; came to day from Philadelphia, from which place he walked to Baltimore. Has had Dysentery for 4 days past, blood and slime; pulse full and frequent; tongue slightly furred. ℞ Calomel grs. x, pulv. ipeca. grs. j. m., one every hour—Sinapism to the epigastrium, as he complains of a pain in the stomach—Venesectio ad 3½ pints.

Sept. 1st. Better to day; spasms of the stomach entirely relieved by the bleeding; bowels opened well by the powders; urinated—Powders continued—Saline mixture.

2d. Improving; bowels well opened; urinated—Powders continued.

3d. Continuing to improve; bowels well opened; urinated freely—Powders continued—Saline mixture.

4th. Continuing to improve—took ol. ricini, but threw it up; in the evening took pulv. rhei grs. x, aloes vj. m., which operated 3 times.

5th. Tongue cleaner; pulse good; urinated; bowels open.—℞ Senna, manna and salts, which operated well.

6th. Convalescing. 7th. Convalescing. 8th. Convalescing.

9th. Not so well to day; bowels affected. ℞ Pulv. opii grs. ij.

10th. Relapsed last night—was very well during the day: but contrary to orders, procured some bad bread and crackers and eat them, (eat them about 5 o'clock in the afternoon, and relapsed about 7 o'clock in the evening), which were the cause of the relapse—cold tongue; pulse very feeble; extremities cold; vomiting and purging (rice water). ℞ Saline mixture.—℞ Submur. hydr. grs. viij, pulv. opii ss., nit. potas. grs. v. m., one every ½ hour for some doses—then every hour—In the afternoon the injection of nitras potassæ ʒij, aqua 1 ℔ m. was introduced in the vein of the arm, which produced a slight reaction; pulse perceptible at the wrist, for a while: pulsations of

the heart about 130 in the minute—he complained, during the operation, of great pain in the shoulders and back: the pain of the back he had complained of during the whole day—he wished very much to have some wine, a small quantity was given to him, which sat pretty well on the stomach; stated that a short time after they commenced the operation, that he felt great heat about the heart; appeared as if he was going to faint, but rallied immediately, and stated, that he thought there was a Spaniard who struck him in the heart: the first evening that he was in the house he made the same remark.*

11th. Died this afternoon at ½ past 4 o'clock.

Septem'r. 1st. Nelly Zere, æt 36, Hooks Town road. Was taken last night with purging; passages yellow; spasms of the legs and arms; pulse not perceptible; tongue purple and cold; extremities cold; eyes dull. ℞ Saline mixture. ℞ Calomel grs. x, nit. potas. grs. v m., one every hour. Died at 1 o'clock.

Sept. 1st. Mrs. Gardner, æt 56, Camden street. Complained on Sunday, of bowel complaint; passages natural in color, but thin; vomited the night before last (rice water); slight cramps of the legs—had been bled and blistered by doctor S. Baker—vomited this morning her drink and breakfast; last night took lime water and milk; had taken during the night 4 pills; urinated; tongue furred; skin warm; would not take any thing until late in the afternoon, then took saline mixture. ℞ Submur. hydr. grs. viij, nit. potas. grs. v m., one every 2 hours.

2d. Improving; tongue more moist; pulse better; bowels opened; urinated; stomach more quiet—Powders continued.

3d. Improving; tongue cleaner; pulse improved. Saline mixture and powders as before.

4th. Continuing to improve; tongue rather cleaner. Saline mixture—Powders continued; stomach still irritable.

5th. Stomach rather irritable; mouth affected by mercury; urinated; bowels opened. ℞ Saline mixture; senna, manna and salts.

6th. Improving; tongue a little cleaner; pulse good; stomach more quiet; urinated; bowels opened this morning.

7th. Stomach quiet; bowels not opened; tongue cleaner—Enema.

8th. Improving; tongue cleaner; stomach more quiet.—℞ Soda water during the day occasionally.

9th. Convalescing. 10th. Convalescing—Soda powders occasionally.

11th. Continuing to improve. 13th. Convalescing.

14th. Convalescing. 15th. Convalescent.

16th. ℞ Ol. ricini ℥ij.

*See Appendix letter B.

Sept. 1st. Philip Johnson, æt 40, Ross street. Was taken this morning with vomiting, tasted bitter, and was thick, which soon changed to (rice water) purging, of the same—spasms of the stomach, and arms; complaining of roaring in the head, and headach; tongue furred; pulse full. Fiat venesectio ad ℥xij. ℞ Calomel grs. x, nit. potas. grs. v m., one every hour. Died this morning.

1st. Henry Miller, æt 12, Sugar alley. Was taken last Wednesday—Vomiting and purging (rice water); cramps of the legs; pulse just perceptible; tongue cold, furred and yellow—had taken some medicine prior to coming in, but not for 2 days; no spasms since coming in. ℞ Saline mixture. ℞ Calomel grs. viij, nit. potas. grs. v. m., one every hour.

2d. Rather improved; bowels opened; pulse improved; saline mixture and powders as before.

4th. Rather better; pulse better; tongue rather cleaner; urinated; bowels opened. ℞ Saline mixture. ℞ Ol. ricini ℥iss—Enema.

5th. Improved; pulse better; tongue cleaner; urinated; bowels well opened by senna, manna and salts. Saline mixture continued.

6th. Improved some; pulse good; tongue still furred; urinated; bowels opened by the senna, manna and salts—Saline mixture continued every 2 hours.

7th. Improving; tongue becoming clean; urinated freely; owels opened this morning. ℞ Saline mixture every 2 hours.

8th. Improving; pulse better; tongue cleaner; urinated; bowels not opened. ℞ Saline mixture. ℞ Pulv. rhei grs. xxv, which operated well.

9th. Improving; tongue clean; pulse good; bowels not open; urinated freely. ℞ Saline mixture. ℞ Pulv. rhei grs. xxv—has not operated—Pulv. repetatur.

10th. Improving; urinated freely; tongue cleaner; pulse good; rests well at night. ℞ Saline mixture every 2 hours.

11th. Tongue somewhat furred; pulse good; urinated freely; bowels bound. ℞ Saline mixture. ℞ Submur. hydr. grs. viij., nitras potass. grs. v. m., one every half hour—then every hour.

12th. Improving; pulse good; tongue still furred; urinated—Saline mixture.

13th. Improving; pulse good; tongue still furred; bowels opened; urinated. ℞ Senna, manna and salts.

14th. Rather better; mouth pretty sore; tongue still furred; bowels opened; urinated. Saline mixture.

15th. Better; mouth better; tongue still furred; bowels opened; urinated. ℞ Saline mixture—Senna tea.

16th. Better to-day; urinated; bowels opened; stools bilious. ℞ Saline mixture. ℞ Senna tea.

17th. Improved; pulse good; mouth better; urinated; bowels opened. ℞ Calomel grs. viij, aloes grs. v. m., one every 2 hours—Saline mixture every 2 hours.

18th. Improved; pulse good; tongue better; urinated freely; bowels opened. ℞ Saline mixture every 2 hours.

19th. Discharged to day.

3d. Patty Gale, æt 50, Saratoga street. Was taken with vomiting and purging (rice water); spasms of the legs—had eaten pears—pulse scarcely perceptible; tongue furred; extremities cold—had taken camphor: on Thursday last took some aloes—purging ever since; diarrhea all the day before coming in—and washed the greater part of that day, and then went into the woods and could not return. ℞ Saline mixture. ℞ Cal. grs. 8, nit. potas. grs. 5. m., one every hour.

4th. Died last night.

4th. Felicia Jones, æt 23, Federal Hill. Complained of great oppression at the præcordia—eat on Saturday peaches and pears: on Sunday apples, sweet potatoes, tomatoes and damson pie—passed no water since yesterday, then pain in passing it; soreness of the bowels; violent spasms of the hands and feet; pulse full, 85 to the minute; tongue slightly furred. ℞ Fiat venesectio ad ℥viij. ℞ Saline mixture. ℞ Calomel grs. x, pulv. opii grs. ij., one every hour for 2 hours. ℞ Calomel grs. x, nitrat. potas. grs. iv., one every 3 hours.

5th. Improved since yesterday; pulse better; tongue a little cleaner and moist; surface warmer—had a slight chill this morning—Saline mixture; senna, manna and salts, which operated.

6th. Tongue slightly cleaned; pulse excited; fever to day as yesterday, but slighter; bowels opened by the senna, manna and salts—Saline mixture continued.

7th. Not so much fever to day; bowels opened; urinated; tongue cleaner. ℞ Saline mixture every 2 hours. ℞ Calomel grs. vj, aloes grs. iv. m., one every 2 hours.

8th. Not so much fever to day; tongue becoming cleaner; urinated; bowels opened. ℞ Nitr. mixture every 2 hours.—℞ Calomel grs. vj, aloes grs. v. m., one every 8 hours.

9th. Much improved; no fever to day; bowels open; urinated; pulse good. ℞ Powders as before—Saline mixture.

10th. No fever to day; pulse pretty good; tongue a little cleaner; bowels opened; urinated; rather more feeble than yesterday, on account of setting up too much yesterday, although spoken to about it very frequently.

11th. Not so well to day; pulse feeble; tongue moderately warm; extremities cool; clammy sweat; passages yellow and watery. ℞ Saline mixture. ℞ Submur. hydr. grs. viij, opii gr. j, nitrat. potas. grs. v. m., one every half hour: then every hour.

12th. Died last night at 12.

4th. John Duck, æt —, Richmond street. Eat peaches on Friday last—took castor oil yesterday morning, which operated well; pain in the back, legs, arms and head. ℞ Calomel grs. x, nitrat. potas. grs. v. m., one every 3 hours. Fiat venesectio ad ℥xv.

5th. Improved; pulse better; tongue rather cleaner; urinated; bowels opened. ℞ Saline mixture—Senna, manna and salts.

6th. Discharged himself this morning.

5th. Discharged Samuel Branson, Sarah Branson and two children; James Steinwitz, Betty Buckler, Nancy Mosher, and Christian Howard.

5th. John Miller, æt 24, Charles street. Cramps of the legs commencing this morning—sat up last night with a friend—during the night took some drink—purging (dark) this morning; slight nausea; pulse full, about 70—passed no urine this morning—pain in the region of the bladder; headach; extremities warm. ℞ Saline mixture. ℞ Calomel grs. xij, nitrat. potas. grs. v. m., one every hour. Discharged himself this afternoon.

5th. Mary Ann Jackson, æt 17, Biddle street. Looseness of the bowels—on Sunday eat sweet potatoes, and cabbage yesterday—vomiting and purging last night—cramps of the arms and legs; hands and feet cold; pulse very feeble; complains of pain in the chest and bowels; vomited of a dark color similar to coffee grounds; passages (rice water)—took powder from doctor Richardson. Died this afternoon at 4 o'clock.

6th. Eliza Dorsey, æt 19, Liberty and Dutch. Was taken this morning with vomiting and purging (rice water); cramps of the legs and arms—eat yesterday *sweet potatoes*, and drank *toddy* 2 or 3 times—tongue cool and furred; pulse weak—had been bled before coming in, and took some No. 6 about one hour before coming in: vomited immediately afterwards, and thinks that she threw it up. ℞ Saline mixture every hour—Calomel grs. xv, pulv. opii grs. ij, for 2 doses—then ℞ Calomel grs. x, nit. potas. grs. v. m., one every half hour: then every hour—Sinapism to the epigastrium—Enema.

7th. Died last night.

6th. Sarah Golden, æt 48, Corner of Gay and Frederick.—Cramps of the stomach and hands last night—pain in the head; pulse good; bowels constipated; tongue slightly furred and warm,

extremities warm—was bled just before coming in. ℞ Saline mixture every hour. ℞ Calomel grs. x, nit. potas. grs. v. m., one powder every hour. Had been drinking before coming in.

7th. Improved some; tongue still furred; urinated; bowels not opened; powders as yesterday: continued through the night and part of the morning. ℞ Saline mixture every hour.—℞ Ol. ricini ℥ij, which operated well.

8th. Much better to day; pulse good; tongue becoming cleaner; urinated; bowels open.

9th. Tongue very much furred; pulse excited; urinated.—℞ Saline mixture. ℞ Submur. hydr. grs. viij, aloes grs. v. m., one powder every two hours—Bowels opened; passages bilious.

10th. Tongue very much furred; pulse a little active; very restless during the greater part of the day; very anxious to go home; mouth sore; urinated freely. ℞ Saline mixture every 2 hours. ℞ Calomel grs. viij, pulv. opii gr. j., nit. potassæ grs. v. m., one powder every hour.

11th. Tongue still very much furred; pulse somewhat excited; more quiet; urinated; bowels bound. ℞ Ol. ricini ℥ij—Saline mixture.

12th. Tongue still furred; pulse good; bowels opened; urinated. ℞ Saline mixture. ℞ Pulv. rhei grs. x, aloes grs. v. m., one every two hours.

13th. Tongue still furred; pulse pretty good; urinated.—℞ Ol. ricini ℥ij.

14th. Tongue still furred; pulse good; urinated freely; bowels opened. ℞ Pulv. rhei grs. x, aloes grs. v. m.

15th. Tongue commencing to peel off; pulse good; urinated; bowels opened; mouth sore. ℞ Saline mixture—Ol. ricini ℥ij.

16th. Tongue a little better; pulse good; urinated; bowels opened. ℞ Saline mixture. ℞ Ol. ricini ℥ij.

17th. Tongue a little better; pulse good; mouth still sore; urinated; bowels opened; stools very bilious. ℞ Senna tea, every 2 hours.

18th. Tongue cleaning off; bowels opened; pulse good; urinated. ℞ Ol. ricini ℥ij—Mouth wash, &c.

19th. Tongue pretty sore, but cleaner; pulse good; bowels open; urinated. ℞ Ol. ricini ℥ij, pulv. Doveri grs. xij.

20th. Tongue cleaning; pulse pretty good; urinated; bowels opened. ℞ Saline mixture—Mouth wash (bark wash.)

21st. Mouth a little better; tongue cleaning off. ℞ Saline mixture (bark wash.)

22d. Mouth better. ℞ Saline mixture.

23d. Mouth better; tongue still furred; pulse good; urinated. ℞ Ol. ricini ℥ij—Saline mixture every 2 hours.

24th. Mouth getting better—Mouth wash.

25th. Mouth getting better. ℞ Mouth wash.
26th. Mouth better—Mouth wash.
27th. Had a child this afternoon. Nitre mixture every two hours.
28th. Better to day—no chill—pulse good; tongue cleaning off; urinated; bowels opened by ℞ Rhubarb grs. x, aloes grs. v. m., one every 2 hours.
29th. Much better to day—no chill—tongue cleaning off.—℞ Rhubarb and aloes—Quinine mixture.
30th. Much better to day. ℞ Quinine mixture. Saline mixture.
September 1st. Much better to day. ℞ Quinine mixture every 3 hours. ℞ Saline mixture every 2 hours.
2d. Tongue cleaning; mouth better. ℞ Quinine mixture every 3 hours—Mouth wash.
3d. Improving. ℞ Saline mixture. Quinine mixture every 2 hours.
4th. Improving. ℞ Saline mixture. Quinine mixture every 3 hours.
5th. Improving. ℞ Saline mixture. Quinine mixture every 2 hours.
6th. Improving. ℞ Saline mixture. Quinine mixture.
7th. Improving, but feeble. ℞ Saline mixture. Quinine mixture.
8th. Improving. ℞ Quinine and saline mixtures. 9th. Improving—℞ Saline and quinine mixtures—℞ Ol. ricini ℥ij.
10th. Improving. ℞ Saline mixture.
11th. Better to day; bowels not open. ℞ Pulv. rhei grs. xxv—Saline mixture.
12th. Discharged.

7th. Charles McDaniel, æt 50, Lexington street. Was attacked with vomiting and purging (rice water), about 3 o'clock this morning—bowels had been affected for 3 days past—spasms of the arms and legs—had been setting up last night with a friend; pulse small; tongue moderately warm and furred: yellow in the centre, edges red—was intoxicated yesterday, and in the habit of getting so—had been bled, and sulph. zinci given prior to coming in—the emetic operated 2 or 3 times; extremities cool. ℞ Saline mixture every hour. ℞ Calomel grs. x, nit. potas. grs. 6. m., one every half hour., for 6 doses: then, calomel grs. viij, nit. potas. grs. v. m.; one powder every hour.
8th. Died this afternoon about ½ past 3 o'clock. For upwards of one hour the muscles of the thighs, fingers and toes, and throat, were very much affected after death.
7th. John Moles, æt 34, Charles street. Had had the bow-

el complaint for 3 days past—eat some cantelopes on Monday, which produced the affection of the bowels (Dysentery)—had taken some brandy and water several times to day before coming in—Pulse full and hard; tongue white. Fiat venesectio ad ℥xxv. ℞ Saline mixture every hour. ℞ Submur. hydr. grs. x, nit. potassæ grs. v. m., one every hour.

8th. Much improved; pulse good; tongue cleaner; urinated; bowels opened. ℞ Powders as yesterday. Saline mixture.

9th. Much improved; pulse good; tongue cleaner; bowels opened by pulvis rhei grs. xxv. Saline mixture.

10th. Much improved; pulse good; tongue cleaner; bowels opened; urinated. ℞ Saline mixture every 2 hours.

11th. Convalescing. 12th. Discharged.

7th. Harriet Snethers, æt 23, Fort road. Was taken on Wednesday with vomiting; threw up only once since, which time she has had the Dysentery; tongue furred; pulse regular; complains of pain in the head. ℞ Saline mixture every hour. ℞ Submur. hydr. grs. x, nit. potas. grs. v., one powder every hour.

8th. Bowels improved; pulse somewhat excited; tongue still furred; slight fever this evening; complains of pain in the head. Powders and saline mixture continued.

9th. Mouth affected by the mercury; complains very much of her throat and mouth; pulse somewhat excited; tongue furred; urinated. ℞ Saline mixture every 2 hours. ℞ Submur. hydr. grs. vj, aloes grs. v., every 2 hours.

10th. Complains very much of her mouth and throat, which is affected by the mercury; pulse good; bowels not very well—opened by the medicine of yesterday. ℞ Saline mixtures. ℞ Pulv. rhei. grs. x. aloes grs. v. m., one every hour.

11th. Complains of her mouth; tongue still furred; pulse good. ℞ Saline mixture. ℞ Pulv. rhei. grs. x. aloes grs. v. m., one every 2 hours.

12th. Mouth very sore; discharging blood from the mouth; urinated; bowels open. ℞ Saline mixture. ℞ Acetat. plumbi wash. ℞ Sup. carb. soda, as mouth wash.

13th. Mouth still very sore; bowels opened; urinated. ℞ Rhubarb and aloes—mouth wash. ℞ Tinct. opii gtt. xxx.

14th. Mouth very sore; bowels opened; urinated; pulse pretty good. ℞ Powders as before—tinct. opii occasionally—mouth wash, (soda.)

15th. Mouth very sore; urinated; bowels opened; pulse pretty good. ℞ Saline mixture. ℞ Tinct. opii gtt. xxv.—mouth wash of supercarb. soda.

16th. Mouth very sore still; urinated; bowels open. ℞ Sa-

line mixture. ℞ Tinct. opii gtt. xxv.—to allay the pain in the mouth—mouth wash.

17th. Mouth still very sore; bowels opened; urinated; pulse pretty good. ℞ Tinct. opii gtt. xx. every 3 hours—mouth wash of charcoal—ditto of sup. carb. soda.

18th. Face much swelled yet; mouth very sore; pulse pretty good; urinated; bowels opened. ℞ Saline mixture—tinct. opii gtt. xxx.—mouth wash.

19th. Mouth very sore still; bowels opened; urinated; pulse pretty good. ℞ Tinct. opii gtt. xxx. every 3 hours—mouth wash.

20th. Mouth still very sore; better in other respects. ℞ Saline mixture—mouth wash of sup. carb. soda, (bark wash.)

21st. Mouth much better; improving in every respect. ℞ Saline mixture every 3 hours—bark wash.

22d. Mouth much better, &c.—Bark wash.

24th. Mouth better. ℞ Mouth wash—tinct. opii gtt. xx., every 2 hours.

25th. Mouth much better; bowels open; urinated—mouth wash.

26th. Mouth nearly well, bowels open; pulse good; urinated. ℞ Saline mixture—mouth wash.

27th. Mouth nearly well. ℞ Mouth wash.

28th. Discharged.

8th. George Marshall, æt 40—Morris Lane. Was taken this morning with purging and vomiting, (rice water,) had eaten nothing improper—tongue furred and cold; pulse weak; extremities cold; skin of the fingers corrugated; spasms of the arms and legs; drinks occasionally; arms and legs rubbed with warm lard. ℞ Saline mixture every hour. ℞ Submur. hydr. grs. x, nitrat. potassæ grs. v. m., one to be taken every half hour, for 3 doses, then every hour.

9th. Died this morning at 12 o'clock.

8th. Nancy Carroll, æt 48, Howard. Was taken yesterday morning with pain in the bowels and back—purging during the day, and last night (dysentery) puking this morning bilious matter, (rice water,) discharged this morning—some blood passed since coming in; spasms in the feet; tongue slightly furred and white; surface warm; pulse about 70. ℞ Saline mixture every hour. ℞ Calomel grs. viij. nit. potassæ grs. v. m., one every hour.

9th. Improved; pulse pretty good; tongue rather cleaner; bowels improved; urinated. ℞ Submur. hydr. grs. viij. nit. potas. grs. v. m., one powder every 2 hours—saline mixture.

10th. Improved; pulse good; tongue slightly cleaned; bowels improved; urinated. ℞ Saline mixture every hour. ℞

Submur. hydr. grs. viij. opii grs. ss. nit. potas. grs. v. m., one every hour.

11th. Improved; pulse good; tongue still furred; urinated; bowels opened. ℞ Saline mixture. ℞ Calomel grs. viij. opii grs. nit. potassæ grs. v. m., one every hour.

12th. Mouth very sore; tongue still furred; urinated bowels open. ℞ Saline mixture. ℞ Pulv. rhei. grs. x, aloes, grs. v, one every 2 hours.

13th. Mouth still very sore; bowels opened; urinated; pulse pretty good; mouth wash. ℞ Rhubarb and aloes.

14th. Mouth still sore; bowels opened; urinated; pulse good. ℞ Saline mixture—mouth wash.

15th. Mouth a little better; bowels opened; urinated. ℞ Saline mixture—mouth wash.

16th. Mouth a little better; bowels opened; urinated. ℞ Saline mixture; mouth wash. ℞ Ol. ricini ℥ij.

17th. Mouth better; bowels open; urinated; pulse good. ℞ Mouth wash—saline mixture 2 hours.

18th. Mouth better; pulse good; bowels opened; tongue a little cleaner; urinated freely. ℞ Saline mixture every 2 hours; mouth wash of sup. carb. soda.

19th. Mouth better; bowels constipated this morning, urinated; pulse good, ℞ Mouth wash—Ol. ricini ℥ij.—Dovers's powder.

20th. Mouth wash. 21st. Mouth wash. 22d. Mouth much better; mouth wash—23d discharged.

8th. Samuel Gough, æt 40, Lerew's Alley. Was costive on Thursday; took some cathartic which operated; on Friday, the bowels affected once during the night; puked once during the night; pulse quick and weak; tongue white and furred; spasms of the arms and legs and stomach—had been bled prior to coming in by doctor Piper. ℞ Saline mixture every hour. ℞ Submur. hydr. grs. x, pulv. opii grs. ij. m., to be taken immediately. ℞ Calomel, grs. viij. nit. potassæ grs. v, m., one every half hour, for 3 doses; then every hour—has not urinated since morning.

9th. Improved; skin soft and pleasant; tongue rather cleaner; pulse good; passages bilious; urinated freely through the day. ℞ Saline mixture. ℞ Calomel grs. viij., nit. potassæ grs. v, m., one every hour—rubbed with lard.

10th. Improved; rested well during the night; pulse pretty good; tongue very much furred; urinated to day; bowels opened; passages very black. ℞ Saline mixture every hour. ℞ Calomel grs. viij. opii grs. j.—nit. potassæ grs. v. m., one every hour—extremities rubbed with lard.

11th. Improved; pulse active; tongue furred and very black; urinated; passages very black; hands and feet warm. ℞ Saline

mixture. ℞. Pulv. aloes grs. v—calomel grs. viij, m., one every hour—Fiat venesectio, ad ℥xx.

12th. Tongue still much furred and black, but commencing to peal off; pulse full; urinated; bowels opened; passages very black. ℞ Saline mixture. ℞ Pulv. rhei. grs. x, aloes grs. v, m., one every 2 hours.—Fiat venesectio, ad ℥xxiv.

13th. Better to day; pulse better; tongue still furred, but commencing to shed; troubled with hiccup. ℞ Saline mixture: Rhubarb and aloes. ℞ Sp. nit. dulc. ʒj.—tinct. opii gtt. viij—each hour.

14th. Tongue still furred; but appears about to shed; bowels opened; urinated; troubled with hiccup. ℞ Saline mixture. ℞ Sp. nit. dulc ʒj—tinct. opii gtt. v, m., a tea spoonful every hour.

15th. Stomach still irritable; matter ejected; bilious; troubled with hiccup; bowels open, stools very dark; tongue cleaning. ℞ Saline mixture. ℞ Sprts. nit. dulc, ʒj—tinct. opii gtt. v, m., a tea-spoonful every 2 hours—Emp. Epispas. to the Epigas-gastrium.

16th. Stomach more quiet; bowels open; passages bilious; tongue cleaning; urinated; pulse good. ℞ Pills as yesterday; saline mixture. ℞ Spr. nit. dulc. ʒj. tinct. opii gtt. v., every 2 hours.

17th. Tongue better; pulse full; urinated; bowels opened. ℞ Calomel and aloes; saline mixture—Fiat. venesect. ad ℥xvj.

18th. Pulse good; bowels opened freely; urinated; tongue a little cleaner. ℞ Powders as yesterday—saline mixture every 2 hours.

19th. Improved; saline mixture; Dovers's powder.

20th. Improved; tongue still somewhat furred. ℞ Saline mixture—Rhubard and aloes—mouth wash.

21st. Improving; tongue cleaning off; pulse pretty good, &c. ℞ Mouth wash, saline mixture.

22d. Much improved; mouth still sore; mouth wash—saline mixture every 2 hours.

23d. Discharged.

8th. Susan Brady, æt 20. Came here in the evening and requested to remain during the night—had been drinking—complained soon after coming in of pain in the epigastrium; pulse good, tongue clear; pain in the head. ℞ Submur. hydr. ℈j. statim sumend.—bowels constipated.

9th. Complained very much of her head; nerves very much affected; fever in the morning; profuse perspiration; bowels not opened; pulse good; tongue furred, white and tremulous. ℞ Subm. hydr. grs. viij—nit. potas. grs. v., one every hour. ℞ Pulv. opii grs. ij—which quickened her nerves—saline mixture

every hour; extremities rubbed with lard; perspiration stopped after the use of the lard; enema of soap and water.

10th. Pulse excited; tongue furred; spasms of the fingers, and arms during the day; hysterical fits several times during the day; very restless during the day; nerves much affected. ℞. Pulv. opii grs. iij. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. viij. opii gr. j. nit. potassæ grs. v. m., one every hour. In the evening fiat. venesectio ad ℥ xvj., which quieted her.

11th. Better to day; skin pleasant; pulse good; tongue furred and tremulous, more quiet to day. ℞. Saline mixture. ℞. Pulv. aloes grs. v, calomel grs. viij. m., one every hour—fiat. venesectio ad ℥ xx.

12th. Rather better to day; tongue furred and tremulous; pulse good; bowels not opened; urinated. ℞. Saline mixture—Enema of soap suds, acted.

13th. Rested well last night; better to day; tongue still much furred and tremulous; stomach still irritable; pulse good; skin pleasant. ℞. Calomel grs. viij. pulv. scammoniæ grs. iv, m., one every hour—enema.

14th. Rested pretty well last night; nervous to day, tongue still furred and tremulous; stomach more quiet; bowels slightly opened; urinated. ℞. Submur. hydr. grs. x. opii grs. ij. m. ℞. Ol. ricini ℥ ij. ℞. Pulv. aloes, gamboge and scammon grs. ij. m., one pill every 2 hours.

15th. Did not rest so well last night; nervous through the day; tongue a little cleaner; but tremulous; urinated; bowels slightly opened; pill as yesterday. ℞. Ol. croton gtt. 1½—Pil. assafetida ij.

16th. Stomach more quiet; bowels slightly opened; passages bilious; pulse and skin good; nerves more quiet. ℞. Saline mixture—pills of calom. and aloes—pil. assafetida, 3 a day.

17th. Stomach quiet; bowels slightly opened; tongue cleaner; urinated. ℞. Croton oil gtt. 1½—in the evening took croton oil, 3 drops.

18th. Much better; tongue cleaning off; pulse and skin good; urinated; bowels opened; mouth still sore. ℞. Saline mixture. ℞. Ol. ricini ℥ij.

19th. Better to day; pulse good; tongue cleaner; bowels opened; urinated. ℞. Ol. croton gt. j.—saline mixture, mouth wash.

20th. Better to day; tongue cleaning off; bowels not very well opened; urinated. ℞. Ol. croton gt. j. operated well—saline mixture, mouth wash.

21st. Much improved; tongue cleaning off; much better; bowels opened; urinated. ℞. Saline mixture, mouth wash.

22d. Improved very much in every respect; mouth better; mouth wash—saline mixture.

23d. Convalescent.

9th. Patrick Quinn, æt 34. Has had the dysentery for four days, had spasms of the legs once, prior to the bowel complaint, vomited a little yesterday what he drank; pulse pretty good; tongue slightly furred; passages very bloody—was at the Alms House some time past, after being cured, which was about the time that the sickness broke out there—ranaway yesterday, went back, but they would not receive him, on account of his former behaviour. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. viij. nit potas. grs. v. m., one every half hour, for 4 doses, then every hour—passages much improved.

10th. Bowels during the morning much improved; passages bilious, but during the evening some little blood passed; urinated freely; pulse good; tongue cleaner. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. viij. opii grs. nit. potassæ grs. v. m., one every hour.

11th. Better to day; pulse good; tongue becoming cleaner: urinated; bowels opened and bilious—saline mixture every hour: powders of calomel grs. viij aloes grs. v. m., one every hour.

12th. Bowels opened through the day; in the morning a little slimy and bloody; but in the afternoon rather too frequently opened; pulse good; tongue still a little furred and black. ℞. Ol. ricini ʒ ij. ℞. Pulv. Doveri grs. x. ij. anodyne enema.

13rh. Bowels opened through the day, and bilious; pulse better; tongue commencing to shed; urinated. ℞. Ol. ricini ʒ ij.

14th: Much better to day; pulse good; tongue peeling; bowels opened; urinated. ℞. Ol. ricini ʒ ij. operated well. ℞. Saline mixture—Dover's powder, at night.

15th. Tongue cleaner; pulse good; bowels opened; urinated. ℞. Saline mixture—Dover's powder at night.

16th. Tongue cleaner; bowels opened; urinated; pulse good. ℞. Saline mixture. ℞. Ol. ricini ʒ ij.

17th. Improved; tongue cleaner; bowels opened; urinated; pulse good. ℞. Oil castor—Saline mixture every 2 hours.

18th. Convalescing. 19th. Doing well—Dover's powders.

20th. Convalescing—mouth wash.

21st. Convalescing—mouth wash, saline mixture.

22d. Discharged.

9th. Sarah Packlet, æt 30, Sharp street. Was taken on Wednesday with bowel compaint; diarrhea, pain in the head at the same time; vomiting on Thursday night and purging; (rice water) spasms of the arms, legs and stomach; pulse very feeble; tongue cold, furred and white; extremities cold; skin slightly corrugated; vomited yesterday; took last night 25 drops of Laudanum,

to allay the vomiting; had given to her to day by doctor F. Chatard, calomel grs. x, opii grs. 1½ m. ℞. Saline mixture. ℞. Subm. hydr. grs. viij. nit. potas. grs. v., one every ½ hour, for 4 doses—then one every hour—died at 20 minutes past 11 o'clock.

10th. James Hughes, æt 50, Guilford alley. Was taken with vomiting on Saturday, and purging yesterday, (rice water) vomited some this morning: but did not this afternoon: eat a sausage last night: spasms in the legs on Saturday night: oppression of the præcordia: pulse pretty good: tongue slightly furred and warm: urinated this morning: urine was very dark. ℞. Saline mixture. ℞. Submur hydr. grs. viij. opii grs. nit. potas. grs. v. m., one every half hour, for 5 doses, then every hour—extremities rubbed with the lard frequently during the day.

11th. Died this afternoon, at half past 4 o'clock.

11th. John Ayler, æt 51, Armstead Lane. Was taken last night, vomiting and purging: cramps of the stomach and legs: vomited what he had eaten: passages bloody at first, then dark: eat some sweet potatoes last week: pain in the head: no passage since about sun-down yesterday: tongue furred, and warm and yellow: pulse full: took some pills and spirits camphor last night, and was bled: sinapism to the stomach and ankles: extremities warm. ℞. Saline mixture. ℞. Subm. hydr. grs. viij. opii grs. j. nit. potassæ grs. v. m., one every hour.

12th. In the morning passages rather slimy and bloody: bilious in the afternoon: pusle good: tongue furred. ℞. Saline mixture—complains of its making him sick at the stomach and rejects it. ℞. Ol. ricini ʒ ij. Pulv. Doveri grs. xij.

13th. Much improved: pulse better: tongue a little cleaner: urinated: bowels opened: passages bilious. ℞. Ol. ricini ʒ ij.

14th. Much improved: pulse good: tongue still somewhat furred: urinated freely. ℞. Ol. ricini ʒ ij.

15th. Much improved in the morning: slight cough in the afternoon: pulse good: tongue cleaner: urinated: bowels opened. ℞. Saline mixture.

16th. Much improved: tongue cleaner: bowels opened: coughs some to day: pulse good. ℞. Saline mixture. ℞. Cough mixture.

17th. Discharged to day.

11th, Elizabeth Ayler, æt 2 and 6 months, Armstead street. Fever, stomach much distented: picks her nose very much. ℞. Calomel grs. v., to be taken immediately ol. ricini ʒ ss.

12th. Better to day: fever not so high: bowels well opened. ℞. Ol. ricini ʒ ij.

13th. Fever not so high to day: tongue slightly furred. ℞. Submur. hydr. grs. v. ℞. Ol. ricini ʒ ij.

14th. Better to day: bowels well opened; pulse a little frequent; tongue clean. ℞. Ol. santon. ʒss, Ol. ricini ʒ ss. m., a tea spoonful morning and evening.

15th, Better to day. ℞. Ol. santon. and ol. ricini.

16th. Better to day: pulse a little excited; tongue slightly furred; bowels opened. ℞. Ol. santon. and ol. ricini continued.

17th. Better to day: pulse a little excited; tongue cleaner. ℞. Submur. hydr. grs. v, operated well.

18th. Very weak; pulse pretty good, but weak; less fever to day; bowels opened by calomel grs. v: worm mixture 3 times a day.

19th. A little better to day: fever not so high.

20th. Much better to day. 21st. Better to day.

22d. Improved much: worm mixture continued.

23d. Discharged.

11th. Edward Hilton, æt 33, Pratt and Light. Bowels very loose for a week past: passages slimy and bloody; vomited bilious matter; pain in the breast: complained of oppression at the precordia; cough occasionally; pulse full and tense; tongue furred; urinated this morning. ℞. Saline mixture every hour—Calomel grs. viij, Opii gr. j, nit. potassæ grs. v. m., one every ½ hour: then every hour.

12th. Pulse good; tongue still furred; urinated; bowels opened; bilious. ℞. Saline mixture—Powders as yesterday.

13th. Better to day: pulse better; tongue still furred; urinated. ℞. Senna, manna and salts: which operated well; stools bilious.

14th. Pretty well in the morning, but delirious in the afternoon; pulse in the afternoon excited; tongue pretty clean; urinated. ℞. Infus, senna—Fiat venesectio; sinapism to the back of the neck. ℞. Pulv. Doveri grs. xij.

15th. Very delirious to day, and all night; pulse excited; tongue pretty clean; bowels opened. ℞. Tinct. opii ʒj, every hour: then 1 gr. opium every hour; in the evening, laudanum ʒij, every hour, until quieted—Fiat venesectio ad ʒ xij.

16th. More quiet to day: pulse pretty good; bowels not opened. ℞. Tinct. opii ʒj, each hour. ℞. Calomel grs. xx.

17th. More quiet; rested pretty well through the night and day: bowels opened; tongue pretty clean; pulse good; urinated. ℞. Tinct. opii ʒj, every 2 hours.

18th. Better to day: rational; tongue clean; pulse pretty good; urinated: bowels opened. ℞. Saline mixture—Pulv. Doveri grs. xij.

19th. Better to day: bowels opened; mouth sore; urinated; tongue clean. ℞. Mouth wash: Pulv. Doveri.

20th. Mouth a little better; bowels open; urinated. ℞. Saline mixture: mouth wash.

21st. A little flighty to day. ℞. Tinct. opii ʒj, every two hours. ℞. Pulv. Doveri grs. xij.

23d. Still delirious: pulse good; tongue clean; bowels not opened; urinated. ℞. Tinct. opii ʒj, Vin. antim. gtt. xx, to be taken every hour.

24th. Quiet to day: rested well last night and to day. Mixture as before every 2 hours.

25th. Quiet to day; rested well last night, and slept some to day; bowels open; urinated. ℞. Tinct. opii ʒj, Vin. antim. gtt. xx, every two hours.

26th. Much better; rested well last night and through the day: mixture every three hours.

27th. Quiet to day. ℞. Mixture every three hours.

28th. Convalescing. 29th. Convalescing. 30th. Convalescing.

September 1st. Convalescent. 2d. Convalescent. 3d Discharged.

11th October. Sally Matthews, æt 45, Green street. Had the bowel complaint since Sunday: rice water discharges; spasms of the legs and hands since the morning; pulse very feeble; tongue cool, furred and white; hands bathed in the clammy sweat. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. viij, Opii gr. j, nit potassæ grs. v. m., one every half hour: then every hour—Epigastrium rubbed with corrosive sublimate and lard—Anodyne enema.

12th. Died last night.

11th. Wm. McMullen, æt 30, Eutaw street. Came in yesterday—but was not entered in this book—was intoxicated—slept about one hour and a half—then was discharged.

12th. John Brooks, æt 30, Frog town. Was taken last Friday with pain in the head—bowels affected since Saturday; passages yellow—had eaten some grapes on Saturday—pain in the back of the neck, pain in the stomach; urinated freely this morning; tongue furred and warm, and pleasant—took calomel and jalap last Friday, and castor oil yesterday; operated well.—℞. Saline mixture every hour. ℞. Submur. hydr. grs. viij, nit. potassæ grs. v. m., ene every hour—passages bilious.

13th. In the morning better, but in the afternoon had a chill; bowels opened; urinated; pulse excited in the afternoon; tongue furred: face flushed. ℞. Submur. hydr. grs. viij, nit. potas. grs. v. m., one every hour—Saline mixture—Fiat venesectio ad ℥xxv.

14th. Pretty well in the morning—fever in the afternoon—complains of pain at the precordia; headach; tongue furred; pulse

full—in the morning, ol. ricini ℥j; operated well—Fiat venesectio ad ℥xvj.

15th. Better in the morning: tongue cleaner, pulse good; skin pleasant—in the afternoon had a chill. ℞. Senna through the day—Nitrous mixture.

16th. Rather better to day, but had fever in the afternoon, but more slight than yesterday. ℞. Ol. ricini ℥ij in the morning; operated well—Nitrous mixture through the day—in the evening, ℞. Calomel grs. x, pulv. Doveri grs. xij. m. statim. sumend.

17th. Rather better through the day—fever came on later than yesterday, not so high—tongue a little cleaner; pulse pretty good; bowels opened; urinated. ℞. Saline mixture. ℞. Calomel grs. viij, aloes grs. v. m., one every 2 hours—Nitrous mixture every 2 hours.

18th. Very little fever to day—tongue rather cleaner than yesterday; bowels opened; passages very bilious; urinated, dark. ℞. Calomel and aloes—Nitrous mixture.

19th. Rather better to day; fever not so high; tongue cleaner; bowels opened; urinated. ℞. Nitrous mixture every two hours: Pulv. Doveri grs. xij.

20th. Better to day; no chill or fever to day; bowels open; urinated; mouth sore. ℞. Nitrous mixture—Mouth wash.

21st. Rather better to day; no fever; tongue slightly furred; pulse pretty good; bowels open; urinated. ℞. Mouth wash—Saline mixture.

22d. Delirious in the evening; pulse full; bowels open, urinated. ℞. Ol. ricini ℥ij—Fiat venesectio ad ℥xx—Emp. epispas. to the neck.

23d. Had a chill in the evening—pretty well during the day; pulse good; tongue still furred; urinated; bowels opened by senna tea—Saline mixture every 3 hours.

24th. Highly delirious; bowels not opened. ℞. Ol. ricini ℥ij—operated pretty well.

25th. Had a chill in the evening; bowels open; pulse good; tongue still furred; urinated. ℞. Saline mixture.

26th. Rather better to day; tongue still furred; bowels opened urinated. ℞. Submur. hydr. grs. viij—aloes grs. v. m., one every 2 hours—nitrous mixture every 2 hours.

27th. Had a chill this afternoon. ℞. Saline mixture every hour.

28th, Rather better to day; pulse good; tongue still furred; bowels opened; urinated. ℞. P. rhei grs. x—aloes grs. v. m., one every 2 hours.

29th. Rather delirious to day—rose in the morning and left the hospital, and went as far as Franklin street—pulse excited;

tongue still furred, and yellow. Fiat venesectio ad ℥x. ℞. Calomel grs. viij, aloes grs. v. m., one every 2 hours.

30th. Better to day; pulse good; tongue still furred; urinated; bowels opened. ℞. Rhubarb grs. x, aloes grs. v. m,, one every 2 hours—Saline mixture every 2 hours.

September 1st. Better to day—tongue cleaning off; bowels open, &c. ℞. Saline mixture every 2 hours.

2d. Better to day—tongue cleaning; bowels open, &c.—℞. Nitrous mixture every 2 hours.

3d. Improving. ℞. Saline mixture.

4th. Improving. ℞. Chalk mixture. Quinine mixture every 2 hours.

5th. Improving. ℞. Nitrous mixture every 2 hours.

6th. Improving. ℞. Nitrous mixture. 7th. Improving. Nitrous mixture.

8th. Improving. ℞. Nitrous mixture every 2 hours.

9th. Convalescing. ℞. Nitrous mixture. 10th. Convalescing. ℞. Nitrous mixture.

11th. Still improving. ℞. Nitrous mixture. 12th. Continuing to improve. ℞. Nitrous mixture. 13th. Improving. Nitrous mixture. 14th. Improving. ℞. Nitrous mixture every 3 hours. 15th. Complaining of pain in the head, not having slept well the night before. ℞. Nitrous mixture.

16th. Head much better. ℞. Magnes. calc. ℥ij.,—Saline mixture.

17th. Improving. ℞. Saline mixture.

18th. Improving. ℞. Saline mixture. 19th. Had a chill to day. ℞. Nitrous mixture. ℞. Rhubarb and aloes.

20th. Had a chill to day. ℞. Nitre mixture. ℞. Submur. hydr. grs. x—Nitrat. potassæ grs. v. m. statim sumend.

21st. No chill to day. ℞. Nitrous mixture. Quinine mixture, every hour.

22d. No chill to day. ℞. Saline mixture. Quinine mixture.

23d. No chill to day. ℞. Saline mixture. Quinine mixture.

24th. Improving. ℞. Saline mixture. Quinine mixture.

12th. John Thompson, æt 32, Richmond street. Was taken at 3 o'clock this morning with purging, greenish; cramps of the arms and legs; complains of deafness; voice affected; pulse barely perceptible; tongue cold, furred and yellow. ℞. Saline mixture. ℞. Calomel grs. viij, opii gr. j, nit. potas. grs. v. m., one every ½ hour. Died this evening at 10 o'clock.

12th. Catharine McFaddon, æt 43, Howard and Madison. Was taken the night before last with bowel complaint, passages (rice water): this morning the same: this afternoon rather darker,

on account of some castor oil, and oil of turpentine, taken from doctor Lloyd—vomited to day (rice water); pulse perceptible; cramps of the stomach, arms and legs; tongue moderately warm, and furred and yellow—had taken also salts and spirits camphor, prior to applying at the Dispensary. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. viij, opii gr. j, nitrat. potas. grs. v, one powder every hour.

13th. Pulse better; tongue furred; skin more pleasant; bowels not opened; stomach more quiet. Powders continued as yesterday. Saline mixture.

14th. Pulse better; tongue slightly furred; skin pleasant; bowels opened; stomach more quiet. ℞. Ol. ricini ℥ij. repetan. ℞. Saline mixture.

15th. Better to day, tongue rather better; bowels opened; urinated; stomach more quiet. ℞. Senna—Saline mixture.

16th. Better to day; pulse good; stomach more quiet; bowels opened, bilious; tongue cleaner. ℞. Ol. ricini ℥ij—Salinemixture.

17th. Better to day; tongue cleaner; pulse good; bowels opened; urinated. ℞. Senna, manna and salts—Mouth wash.

18th. Rather better to day; bowels opened; tongue better; pulse pretty good; urinated. ℞. Saline mixture. ℞. Senna tea. ℞. Pulv. Doveri grs. xij—Effervescing mixture.

19th. Mouth sore; tongue a little cleaner; pulse good; bowels opened, passages dark; urinated. ℞. Senna tea—Mouth wash. Pulv. Doveri grs. xij.

20th. Tongue still furred; bowels not well opened; pulse good; urinated—Saline mixture. Ol. ricini ℥ij, ol. croton gt. ss.

21st. Mouth better, better otherwise. ℞. Mouth wash.

22d. Tongue slightly furred; pulse good; mouth rather better; urinated. ℞. Senna tea—Mouth wash. Saline mixture.

23d. Pulse good; tongue slightly furred; urinated; bowels not opened. ℞. Senna tea—Saline mixture every 3 hours.

24th. Better; pulse good; tongue slightly furred; urinated; bowels not opened in the morning. ℞. Senna 2 wine glassful, operated well.

25th. Bowels were not opened; pulse pretty good; tongue nearly clean; mouth better; urinated; in the afternoon had a passage, slightly tinged with blood. ℞. Mouth wash—Calomel grs. xij, one every 2 hours.

26th. Mouth better; bowels open; tongue cleaner; pulse good; urinated. Mouth wash.

27th. Mouth better; bowels well opened, &c. ℞. Ol. ricini ℥ij—Saline mixture—Mouth wash.

28th. Better to day; tongue slightly furred; pulse good; bowels opened; urinated. ℞. Rhubarb and aloes.

29th. Better to day; bowels opened, &c. ℞. Saline mixture. Pulv. rhei grs. x, aloes grs. v. m., one every 3 hours.

30th. Better to day; bowels well opened by rhubarb and aloes.

Sept. 1st. Much better. ℞. Saline mixture—Mouth wash.

2d. Mouth better—Mouth wash. 3d. Mouth better—wash.

4th. Mouth better; tongue a little furred. ℞. Rhubarb and aloes—Mouth wash.

5th. Better to day. ℞. Saline mixture.

6th. Better to day. ℞. Saline mixture.

7th. Better to day. ℞. Saline mixture.

8th. Better to day. ℞. Saline mixture.

9th. Convalescing. 10th. Convalescing. 11th. Convalescing.

12th. Discharged to day.

13th. Mary Layton, æt 35, Conway street. Was taken yesterday with the bowel complaint—has been unwell for some weeks—passages (rice water); pain in the head; pulse full and tense; tongue warm, furred, and dry; vomited before coming in; had taken laudanum, to allay the irritability of the stomach; urinated. ℞. Saline mixture. ℞. Calomel grs. viij, opii gr. j, nitrat. potas. grs. v. m., one every hour. Fiat venesectio ad ℥vj.

14th. Pulse better; tongue furred; stomach quiet; bowels opened, stools bilious; urinated. ℞. Powders as yesterday, for 3 doses, then ℞. Ol. ricini ℥ij—Saline mixture.

15th. Pulse better; tongue cleaner; stomach quiet; bowels opened; urinated. ℞. Ol. ricini ℥ij—Saline mixture.

16th. Better to day; pulse good; tongue better; urinated; bowels opened. ℞. Ol. ricini ℥ij—Saline mixture.

17th. Much improved; tongue cleaner; bowels opened; urinated; pulse good. ℞. Saline mixture every 2 hours—Mouth wash; senna tea.

18th. Mouth sore; pulse pretty good; urinated; bowels opened. ℞. Mouthwash—Pulv. Doveri.

19th. Mouth sore; pulse good; tongue a little cleaner; urinated. ℞. Mouth wash—Pulv. Doveri grs. xij.

20th. Mouth sore; pulse good, &c. ℞. Mouth wash.

21st. Mouth better; bark wash.

22d. Mouth better; mouth wash.

23d. Pretty well during the day; chills towards evening; pulse good; tongue pretty clean; bowels open. ℞. Ol. ricini ℥ij.

24th. Much better to day; mouth better; mouth wash.

25th. Mouth better; mouth wash. 26th. Mouth better.

27th. Mouth better; wash.

28th. Mouth better; bowels not opened. ℞. Senna tea.

29th. Rather better to day. ℞. Saline mixture. ℞. Senna tea.

30th. Bowels not opened; mouth better, &c. ℞. Ol. ricini ℥ij.

September 1st. Stomach and feet swelled; bowels opened; tongue clean; urinated, &c. Nitrous mixture every 2 hours.

2d. Stomach and feet swelled; bowels opened; tongue clean, red; urinated. ℞. Chalk mixture; nitrous mixture.

3d. Stomach and feet still swelled. ℞. Jalap, and super. tart. potas. ana grs. v. m., one night and morning.

4th. Not so much swelled. Powders continued.

5th. Not so much swelled. Powders continued.

6th. Not so much swelled. Powders continued.

7th. Not so much swelled. Powders continued.

8th. Still improving. Powders continued.

9th. Not so much swelled. Powders as before; nitrous mixture.

10th. Not so much swelled. Powders as before: nitrous mixture.

11th. Not so much swelled to day—complains of slight pain in the stomach; stools slightly bloody. ℞. Calomel grs. x—Pulv. Doveri grs. xij m.

12th. Swelling gone down very much; tongue still red; bowels open; urinated. ℞. Chalk mixture.

13th. Swelling going down; tongue still red. ℞. Chalk mixture.

14th. Swelling nearly gone down; tongue still red. ℞ Chalk mixture. ℞. Nitrous mixture.

15th. Discharged.

13th. Elizabeth Mosher, æt 19, corner of Light and Ruxton streets. Has had diarrhea for 4 days; passages dark (rice water); discharges this day; cramp in the stomach and feet; vomited some bile to day; skin warm; pulse tolerably good—eat tomatoes yesterday—tongue furred and white; had taken some charcoal, and also a powder, from doctor Miller. ℞. Saline mixture.—℞. Submur. hydr. grs. viij, opii gr. j, nit. potas. grs. v. m., one every hour.

14th. Pulse good; tongue furred; bowels opened; stools bilious; stomach more quiet. ℞. Ol. ricini ℥ij—vomited it; repetan.

15th. Stomach still irritable; matter ejected bilious; tongue a little better. ℞. Calomel grs. viij, nit. potas. grs. v. m., one every 2 hours.

16th. Stomach more quiet; bowels opened; pulse good; tongue cleaner. ℞. Ol. ricini ℥ij—Effervescing mixture.

17th. Convalescent. ℞ Mouth wash. 18th. Discharged.

13th. William Ingham, æt 69, Cove street. Was taken about noon—bowels affected since last Friday; (rice water) passages to day; spasms of the stomach, arms and legs—has eaten nothing improper—pulse just perceptible; tongue cold, furred, and white; voice husky; extremities cold. ℞. Submur. hydr. ℈j,

opii grs. ij. Submur. hydr. grs. viij, nit. potas. grs. v, opii gr. i m., one every hour.

14th. Died this morning.

13th. Wm. James, æt —, Hanover street. Pain in the head and stomach—pulse full and tense; bowels bound; tongue furred. ℞. Submur. hydr. grs. xv. ℞. Senna, manna and salts—Fiat venesectio ad ℥xxv; repetan.

14th. Better to day; pulse better; tongue somewhat furred; urinated; bowels opened, very bilious. ℞. Submur. hydr. grs. x, nit. potassæ grs. v. m., ol. ricini ʒ ij.

15th. Much better to day, in every respect.

16th. Discharged.

14th. George Smith, æt 30, Wagon alley. Was taken with purging and puking this morning; cramps of the extremities; extremities cold; tongue furred and cold; cold clammy perspiration—had eaten some apples and pears: drank some whiskey yesterday, and some to day. ℞. Submur. hydr. grs. x, opii gr. j. m.—made use of the actual cautery along the spine, and over the stomach—acted well. Died ½ hour after coming in.

14th. Sally Johnson, æt 29, Lerew's alley. Was taken yesterday with bowel complaint—discharges (rice water); cramps in the extremities and stomach; tongue furred and cold; pulse feeble—had eaten a peach yesterday morning—extremities cold; voice husky. ℞. Calomel grs. x, pill and opii grs. v. m., one every hour—Saline mixture every hour. Died at 11 o'clock in the evening.

14th. Hardy Alexander, æt 25, Light street wharf. Was taken yesterday with bowel complaint (rice water); spasms of the fingers and toes; sick at the stomach; pulse feeble; tongue cool, furred and yellow; extremities cold. ℞. Saline mixture—℞ Calomel grs. x, opii gr. j. m., one every hour for 3 hours—then ℞. Calomel grs. viij, opii gr. j, nit. potassæ grs. v. m., one every hour.

15th. Stomach very irritable; pulse better; tongue furred; passages slightly bilious; matter vomited bilious; cold clammy sweat. ℞. Saline mixture—Powders as yesterday; rubbed with lard—Emp. epispas. to the epigastrium.

16th. Stomach rather more quiet; matter ejected bilious; pulse pretty good; tongue furred; urinated slightly; bowels opened slightly. Effervescing mixture—Powders as yesterday.

17th. Stomach more quiet; tongue better; pulse good; bowels slightly opened; urinated. ℞. Calomel grs. viij, aloes grs. v. m., one every 2 hours—Saline mixture. ℞. Senna tea, in the evening.

18th. Rather better; stomach more quiet; tongue a little better; pulse better; bowels opened. ℞. Calomel and aloes.

19th. Better yesterday; pulse pretty good; tongue still furred; bowels slightly opened; urinated. ℞. Submur. hydr. ʒj. ft. pill. xij., one every 3 hours—nitre mixture every 2 hours.

20th. Not so well in the morning on account of going down stairs; extremities cold; pulse small; tongue furred and dry—in the afternoon a change for the better. ℞. Calomel grs. x. nit. potas. grs. v. m., one every hour—ung. hydrar. on the side, hands, and feet rubbed with the lard.

21st. Rather better to day; rested well last night; tongue furred; pulse pretty good, skin better to the feel; feet warmer. ℞. Calomel gr. x. nitras. potas. grs. v. m. ℞. Pulv. aloes.—Scammoniæ ana grs. iv. m., one powder every 2 hours.

22d. Rather better to day; pulse pretty good; tongue slightly furred, but red at the tip; bowels opened; urinated. ℞. Senna tea—saline mixture, quinine mixture, every 3 hours.

23d. Discharged, though not well—his affairs preyed on his mind very much; considered it better to let him go, fearful of its producing bad effects.

14th. Christiana Howard, æt 50, French alley. Was taken this morning with pain in the stomach; purging since last night; (rice water) pain in the head; pulse full; tongue furred and yellow; edges red; eat a roasted apple a short time ago; eat some pork-steaks yesterday; drank porter and whiskey to day; brought in some apples, onions and bread. ℞. Saline mixture every hour. ℞. Submur. hydr. gr. x. nit. potas. grs. v. m., one every hour—was discharged, cured on the 5th instant.

15th. Better to day; pulse good; tongue furred; bowels opened; urinated. ℞. Saline mixture every hour. ℞. Ol. ricini ʒ ij.

16th. Better to day; tongue still furred; bowels opened; urinated. ℞. Saline mixture. ℞. Subm. hydr. grs. viij. nit. potas. grs. v. m., one every hour.

17th. Better to day, tongue still much furred, pulse good; bowels opened; urinated. ℞. Saline mixture every 2 hours. ℞. Calomel and aloes every 2 hours.

18th. Mouth sore; tongue still furred; pulse good; bowels opened; urinated. ℞. Senna—saline mixture, mouth wash.

19th. Mouth sore; tongue a little cleaner; pulse good; bowels opened; urinated, stools bilious. ℞. Ol. ricini ℥ij.—mouth wash—Saline mixture 2 hours.

20th. Mouth still pretty sore; bowels opened; urinated;—saline mixture—Ol. ricini ℥ij. mouth wash.

21st. Mouth sore, tongue cleaner; pulse good; bowels opened. ℞. Saline mixture—mouth wash.

22d. Mouth sore; better otherwise—mouth wash.

23d. Mouth better—mouth wash.

24th. Mouth better—mouth wash.

25th. Mouth better—wash.

26th. Mouth better; wash. ℞. Saline mixture every 2 hours.

27th. Mouth better; wash—Saline mixture every 2 hours.

28th. Mouth better—wash.

29th. Mouth better; tongue cleaner; bowels open; urinated. ℞. Bark wash—saline mixture every 2 hours.

30th. Mouth better—wash.

September 1st. Mouth better; wash. 2d. Mouth better; wash. 3d. Convalescent. 4th. Discharged.

15th. Michael Foot, æt 67, Bowley's wharf. Was taken last Sunday morning with bowel complaint, dysentery; ate a peach on Saturday night—urinated through the day, very dark color; pulse full and tense; tongue slightly furred, white and warm; extremities warm, habit of drinking; drank yesterday more than ½ pint of whiskey. ℞. Saline mixture. ℞. Submur. hydr. grs. x. nit. potassæ grs. v. m., one every hour.—Fiat venesectio ad 2½ ℔.

16th. Better to day; pulse good; tongue furred; bowels opened: urinated. ℞. Saline mixture. ℞. Calomel grs. viij. nit. potassæ grs. x. m., one every hour.

17th. Much better; pulse good; tongue furred still; bowels opened; urinated. ℞. Calomel grs. viij. nit. potassæ grs. v. aloes, grs. v. m., one every 2 hours. ℞. Ol. ricini ʒ ij.—Saline mixture every 2 hours.

18th. Pretty well through the morning; about noon complained of weakness; pain in the stomach, and had a chill a short time afterwards. ℞. Senna in the morning, which operated well; saline mixture—Pulvis Doveri. tinct. opii ʒj.—took some ale sangaree.

19th. Much better to day; no chill; tongue much cleaner; bowels opened; urinated. ℞ Ol. ricini ʒij.—Saline mixture—ale sangaree.

20th. Better to day; tongue better; pulse good; urinated; bowels not well opened in the morning. ℞. Ol. croton in glyster, which operated well.

21st. Tongue cleaner; pulse pretty good; bowels opened; urinated. ℞. Quinine mixture.

22d. Convalescent. ℞. Quinine mixture every 3 hours.

23d. Discharged.

16th. Thomas Cain, æt 25, Elkridge Landing. Was attacked last Thursday with dysentery; bilious discharges; vomited last night; tasted bitter; ate two apples on Wednesday; tongue furred and white; pulse quick and tender; took some salts on Thursday—was prescribed for by doctor Richardson; supposed

to be calomel. ℞. Submur. hydr. grs. x., one every hour. ℞. Ol. ricini ℥ij.—Fiat venesectio ad ℥xxiv.

17th. Better to day; bowels opened; pulse good; tongue furred; urinated. ℞. Calomel grs. viij. aloes grs. v. m., one every 2 hours—saline mixture every 2 hours—senna tea.

18th. Rather better to day; tongue still furred; pulse pretty good; urinated; high colored; bowels opened. ℞. Rhubarb and aloes—Saline mixture.

19th. Pulse full and tense; bowels slightly opened; tongue furred; urinated. ℞. Senna tea.—Fiat. venesectio ad ℥xvj

20th. Better to day; tongue better; pulse good; urinated; bowels not well opened in the morning. ℞. Ol. croton in a glyster which operated well.

21st. Rather better to day; tongue better; pulse good; bowels opened; urinated. ℞. Senna tea—pulv. Doveri grs. xij.

22d. Better to day; tongue cleaning off; pulse pretty good; urinated. ℞ Senna tea.

23d. Better to day; tongue cleaning off; bowels opened; pulse good; urinated. ℞. Senna tea.—Nitrous mixture.

24th. Better to day; pulse good; urinated; bowels slightly opened by castor oil.

25th. Improving; tongue cleaning off; pulse good; bowels open; urinated. ℞. Senna.

26th. Improving; tongue cleaner; bowels opened; urinated. ℞. Rhubarb grs. x. aloes, grs. v. m., once every 2 hours—nitrous mixture.

27th. Much better; saline mixture every 2 hours;—nitrous mixture every 2 hours.

28th. Better to day—saline mixture every 2 hours.

29th. Better to day; rested well at night; tongue cleaning; bowels open. ℞. Saline mixture every 2 hours.

30th. Better to day; bowels opened; tongue cleaner; urinated. ℞. Saline mixture every 2 hours.

September 1st. Better to day. ℞. Saline mixture. 2d. Convalescing—Saline mixture. 3d. Convalescing. 4th. Convalescing. 5th. Convalescing. 6th. Convalescing. 7th. Convalescing. 8th. Convalescing. 9th. Convalescing. 10th. Convalescing—Saline mixture every 2 hours.—11th. Convalescing. ℞ Saline mixture—12th. Convalescing. ℞. Saline mixture. 13th Convalescing. 14th. Convalescing. 15th. Convalescing. 16th. Convalescing. 17th. Discharged.

16th. Isaac Thomas, æt 33, Sharp street. His bowels were affected last Tuesday, but passed off, was taken this afternoon with headach; sickness at the stomach, and oppression at the precordia; pulse full and tense; tongue furred and white; edges red; has eaten nothing improper; took this afternoon some sps.

camphor. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. x., one every hour.—Fiat. venesectio ad ℥xv.

17th. Much better to day; tongue slightly furred; bowels opened; stools bilious; urinated; pulse good. ℞. Calomel grs. viij. aloes grs. v. m, one every 2 hours—Ol. ricini ʒ ij.—saline mixture.

18th. Much better, pulse good; tongue pretty clean; urinated; bowels opened. R. Rhubarb and aloes, saline mixture—Convalescing.

19th. Much better; tongue cleaner; pulse good; bowels opened; urinated. ℞. Ol. ricini ʒ ij.—saline mixture.

20th. Tongue a little cleaner; pulse good; bowels acted upon by the oil taken last night; urinated; mouth sore—mouth wash, saline mixture every 2 hours.

21st. Tongue clean; pulse good; bowels opened; urinated. ℞. Mouth wash.

22d. Convalescing. 23d. Discharged.

16th. William Ayler, æt 5, Armstead Lane. Stomach much distended; appetite very great, &c.—Vermes. ℞. Ol. santon ʒj. ol. ricini ʒ j. m., a tea spoonful 3 times a day.

17th. Worm mixture continued. 18th. Worm mixture continued. 19th. Worm mixture continued. 20th. Mixture continued. 21st. Mixture continued. 22d. Mixture continued. 23d. Discharged.

17th. Ruth Pennington, æt 27, Hookstown road, belonging to the Powhattan Works. Was taken this afternoon with sickness of the stomach; after drinking some water took some brandy; and spirits of camphor; and ate some stewed oysters; vomited up the oysters; pulse full; tongue slightly furred; urinated through the day; threw up some blood. ℞. Calomel grs. x. statim sumend. fiat venesectio. ad ʒ xij. saline mixture every hour—in the habit of getting intoxicated.

18th. Pretty much the same as yesterday; tongue furred, &c. ℞. Calomel and aloes every 2 hours—senna tea every hour, a wine glassful saline mixture.

19th. Discharged.

18th. Ann Snethers, æt 23, Charles street. Unwell for a week past; pain in the head; chill every morning; fever in the afternoon and night; great thirst; pains in the limbs and back; bowels natural; pulse quick and tense; tongue slightly furred and white. ℞. Submur. hydr. grs. x. every hour for 3 hours—then ol. ricini ℥ij. saline mixture—Emp. epispas., to the epigastrium. Fiat venesectio ad ℥xvj.

19th. Better to day; no chill to day; pulse good; tongue a little cleaner; urinated. ℞. Ol. ricini ℥ij.—Saline mixture.

20th. Better to day; tongue a little cleaner; bowels opened; stools bilious; urinated. ℞. Senna tea.

21st. Tongue cleaner; pulse better, no chill to day; bowels opened; urinated. ℞. Ol. ricini ℥ij.

22d. Tongue furred still, but cleaner than yesterday; improving. ℞. Saline mixture every 2 hours—Rhubarb and aloes.

23d. Discharged.

18th. Alexander Harper, æt 35, George street. Unwell for 3 weeks past; complains of weakness and pain in the limbs and back; pain in the head; bowels constipated for some time; pulse full; tongue furred and yellow; urinated this morning high colored; had taken some gin just before coming in—in the habit of drinking.

19th. Better to day; pulse better; tongue cleaner; stomach quiet; urinated. ℞. Saline mixture.

20th. Better to day. ℞. Saline mixture.

21st. Well in the morning; had a chill abour 2 o'clook in the afternoon; fever afterwards. ℞. Ol. ricini ℥ ij.—Saline mixture.

22d. Better to day; tongue cleaning off; bowels opened; pulse good; urinated. ℞. Ol. ricini ℥ij.—Saline mixture.

23d. Pretty well in the morning; pulse good; tongue cleaner; urinated. ℞. Ol. ricini ℥ ij.—had a chill in the afternoon.

24th. Pretty well to day; tongue slightly furred; pulse good; and bowels opened by castor oil ℥ ij.

25th. Much better to day; no chill. ℞. Quinine mixture every hour.

26th. Discharged.

18th. John Bryan, æt 36, Whetstone Point. Was taken six weeks ago, with a cough, since pains in the legs and left side, and coughs; tongue warm and furred; pulse full; tightness across the chest, urinated; bowels opened; was bled and took some medicine from doctor Lloyd.—Effervescing mixture. ℞. Ol. ricini ℥ ij. saline mixture.

20th. Better to day; free from pain, cough not near so troublesome; bowels well opened; urinated; can lay on his left side without producing coughing. ℞. Cough mixture occasionally.

21st. Cough better to day, and better in other respects—Cough mixture, Dover's powder.

22d. Cough better to day; rested well last night—mixture continued.

23d. Cough better; rested well last night; pulse good; bowels opened; urinated. ℞. Cough mixture.

24th. Cough better; rested well last night; bowels not opened; urinated. ℞. Dover's powder—cough mixture.

25th. Cough better; pulse good; tongue cleaning; urinated; bowels opened by ol. ricini ℥ ij.

26th. Cough better, &c. ℞. Cough mixture—Pulv. Doveri grs. xij.

27th. Cough better. ℞. Cough mixture, occasionally—Pulv. Doveri

28th. Cough better. ℞. Cough mixture, ol. ricini ℥ij.

29th. Cough better; bowels opened; rested well last night. ℞ Pulv. Doveri xij.

30th. Cough better. ℞. Cough mixture—Dover's powder

September 1st. Cough better. ℞. Cough mixture occasionally. ℞. Dover's powder.

2d. Cough better—cough mixture.

3d. Cough better, &c.—Cough mixture.

4th. Cough better—cough mixture. ℞. Ol. ricini ℥ij.

5th. Cough better—cough mixture every 2 hours.

6th. Cough better. ℞. Cough mixture.

7th. Cough better—cough mixture. 8th. Cough better—cough mixture. 9th. Cough better—cough mixture.

10th. Cough better. ℞. Cough mixture. 11th. Cough better—cough mixture. 12th. Cough better. ℞. Cough mixture.

13th. Cough better—cough mixture. 14th. Cough better—cough mixture. 15th. Cough better—cough mixture.

16th. Cough better—cough mixture. 17th. Cough better—cough mixture. 18th. Cough better—cough mixture. 19th. Cough better—cough mixture. 20th. Cough better—mixture. ℞. Ol. ricini ʒ ij., operated well. 21st. Cough better—cough mixture. 22d. Cough better—cough mixture. 23d. Cough better—cough mixture. 24th. Cough better—mixture.

19th. George Butler, æt 18, Cove street. Was taken last night, pain in the stomach and head; vomiting; pulse full and hard; tongue furred; extremities warm. ℞. Submur. hydr. grs. xv. ℞. Ol. ricini ʒ ij.—Fiat venesectio ad ʒ xiv.

20th. Better to day; pulse full, but not tense; tongue red; bowels well opened; urinated. ℞. Ol. ricini ʒ ij.—saline mixture every hour.

21st. Better to day—convalescent.

22d. Discharged.

20th. William Dorsey, æt 60, Howard street. Was taken this morning at 6 o'clock; vomiting and purging; (rice water,) had diarrhea yesterday; spasms of the arms and legs; pulse barely perceptible; tongue cold, furred and yellow; cold clammy sweats; extremities cold; drank some whiskey yesterday. ℞. Submur. hydr. grs. x. opii grs. ij. m., one powder—then submur. hydr. grs. x. nit. potas. grs. v. m., one every half hour—saline mixture every hour—extremities rubbed with the lard—died this afternoon at 3 o'clock, about 5 hours after coming in.

20th. Debby Hurley, æt 17, Richmond street. Was taken sick this morning: sickness at the stomach; vomiting and purging (rice water): diarrhea yesterday; spasms of the arms and legs; pain in the back; pulse feeble; tongue cool, furred and yellow; urinated to day; extremities cold; cold clammy sweat. ℞. Submur. hydr. grs. xij, one powder every ½ hour, for 4 doses: then every hour—Saline mixture every hour. ℞. Emp. epispas. to the epigastrium: rubbed with the lard.

21st. Rather better: a slight change in the passages, for the better; stomach pretty quiet; skin better; pulse somewhat improved. ℞. Calomel grs. viij, pulv. scammonia grs. iv. m., one powder every hour—Effervescing mixture.

22d. Rather better to day; skin better; pulse weak; tongue still furred; stomach pretty quiet; bowels opened; stools bilious. ℞. Ol. ricini ʒ ij—Saline mixture.

23d. Rather better to day; stomach more quiet; bowels not opened; pulse better—has not urinated—complains of pain in the lower part of the abdomen. ℞. Senna tea, which did not operate—Enema, which acted a little.

24th. Rather better to day; bowels opened; pulse still weak; tongue cleaning off. ℞. Senna tea—Saline mixture.

25th. Rather better to day; pulse improved; tongue cleaning off; vomited slightly, matter bilious; bowels open. ℞. Senna—℞. Rhei grs. x, aloes grs. v. m., one every hour.

26th. Better to day; tongue cleaner; pulse better; urinated; bowels opened. ℞. Rhubarb grs. viij, aloes grs. v. m., one every 2 hours—Nitrous mixture every 2 hours.

27th. Pulse better; tongue rather cleaner; bowels opened, urinated. ℞. Rhei grs. x, aloes grs. v. m., one every 2 hours—Nitrous mixture.

28th. Rather better to day; tongue cleaner; pulse better; bowels open; urinated. ℞. Rhei and aloes: nitrous mixture every 2 hours.

29th. Better to day; pulse improved; bowels opened; tongue still much furred; urinated. ℞. Rhei grs. x, aloes grs. v. m., one every 2 hours—Saline mixture—Has urticaria on the face, breast and arms.

30th. Rather better; pulse pretty good; tongue still much furred, but looser; urinated; bowels opened. ℞. Pulv. rhei grs. x, aloes grs. v. m., one every 2 hours—Saline mixture every 2 hours.

September 1st. Not so well; tongue cleaner, but red; bowels open; pulse very feeble; urinated—complains of her throat and breast. ℞. Chalk mixture every 2 hours—Sinapism to the breast.

2d. Died to day at 1 o'clock.

21st. A white man name unknown—From about Frogtown: brought in by a common cart—was dead when brought into the hospital.

24th. Joseph Neal, æt 35, Eutaw street. Has complained of pain on each side, on pressure, for some months—pulse weak and frequent; tongue coated and yellow—had chills some days back, but have been stopped—urine high colored; passages black just now, but generally of a clay color. ℞. Calomel grs. x. ℞. Calomel grs. viij, nitr. grs. v. m., one every 2 hours.

25th. Better to day; pulse pretty good; tongue furred, but more loose; urinated; bowels opened; stools bilious. ℞. Senna. ℞. Submur. hydr. grs. iij, aloes grs. v. m., one every 2 hours.

26th. Better to day; tongue cleaner; bowels opened; pulse good; urinated. ℞. Rhubarb and aloes.

27th. Better to day; tongue cleaner; bowels opened; urinated; pulse good—Senna.

28th. Better to day; tongue cleaning off; pulse good; urinated; bowels open. ℞. Rhei grs. x, aloes grs. v. m., one every 2 hours—Saline mixture.

29th. Tongue cleaning; pulse good; urinated; bowels opened. ℞. Rhei grs. x, aloes grs. v. m., one every 2 hours.

30th. Better; tongue cleaner; pulse good; bowels opened; urinated. ℞. Saline mixture every 2 hours.

September 1st. Much better to day—Nitrous mixture every 2 hours.

2d. Better to day—Nitrous mixture every 2 hours.

3d. Convalescing. 4th. Convalescing. 5th. Convalescing. 6th. Convalescing. 7th. Convalescing. 8th. Convalescing. 9th. Convalescing. 10th. Convalescing. ℞. Saline mixture every 2 hours. 11th. Convalescing. ℞. Saline mixture. 12th. Convalescing—Saline mixture. 13th. Convalescing. 14th. Convalescing. 15th. Convalescing. 16th. Convalescing. 17th. Convalescing. 18th. Convalescing. 19th. Convalescing. 20th. Convalescing. 21st. Convalescing. 23d. Convalescing. 24th. Convalescing.

24th. Wm. Montwell, æt 29, French alley. Has had a pain in the head, and right side, for 2 days past—pulse full and hard; tongue furred and white; bowels bound; urine high colored—habit of drinking. ℞. Calomel grs. xv., stat. sumend. ℞. Calomel grs. viij, nitre grs. s. v. m., one every 2 hours.

25th. Better to day; pulse good; tongue furred, but not so much as yesterday; pain in the side left him; urinated; bowels opened; stools bilious. ℞. Senna tea.

26th. Better to day; pulse good; tongue cleaner; bowels opened. ℞. Rhubarb and aloes—oil castor ℥ij.

27th. Better to day; pulse good; tongue cleaner; urinated; bowels opened by senna tea.

28th. Better to day; pulse good; tongue still furred; urinated; bowels opened. ℞. Rhei grs. x, aloes grs. v. m., one every 3 hours—Saline mixture.

29th. Much better; tongue still furred, but cleaning; bowels well opened; urinated. ℞. Rhei grs. x, aloes grs. v. m., one every 2 hours. 30th. Convalescing. September 1st. Convalescent. 2d. Convalescent. 3d. Discharged.

27th. Jarrett Eichelberger, æt 23, Saratoga street. Debility, and sickness at the stomach, for the last month—vomited to day, matter ejected bilious; dysentery for some time past; pulse feeble and frequent; tongue slightly furred; extremities warm—has been taking assafetida pills from doctor Cronmiller. ℞. Saline mixture every 2 hours—Calomel grs. x, Ipecac. gr. j. m., one every 2 hours.

28th. Pulse weak, tongue furred; urinated; bowels opened; stools bloody. ℞. Ol. ricini ʒ ij. ℞. Submur. hydr. grs. x, pulv. Doveri grs. xij. m.

29th. Tongue clean; pulse pretty good; urinated; stools bloody. ℞. Calomel grs. viij, ipecac. gr. j. m., one every 2 hours.

30th. Stools still bloody; pulse pretty good; tongue slightly furred; urinated. ℞. Calomel grs. vj, ipecac. gr. j. m., one every 2 hours.

September 1st. Stools improved some; mouth sore; pulse pretty good; tongue slightly furred. ℞. Saline mixture every 2 hours.

2d. Mouth sore; stools improved; urinated; pulse better. ℞. Nitrous mixture every 2 hours—Mouth wash.

3d. Mouth sore; bowels improved; tongue clean; urinated; pulse good. ℞. Saline mixture; mouth wash.

4th. Improved. ℞. Mouth wash—Saline mixture every two hours.

5th. Improved. ℞. Saline mixture—Mouth wash.

6th. Improved. ℞. Saline mixture—Mouth wash.

7th. Better to day. ℞. Saline mixture—Mouth wash.

8th. Better to day. ℞. Saline mixture—Mouth wash.

9th. Mouth better. ℞. Mouth wash—Saline mixture.

10th. Mouth better. Mouth wash—Saline mixture.

11th. Mouth better; bowels not opened. ℞. Ol. ricini ʒ ij. ℞. Pulv. Doveri grs. xij.

12th. Much better; mouth nearly well. ℞. Saline mixture; wash.

13th. Better; mouth better. ℞. Saline mixture.

14th. Better; mouth nearly well. ℞. Saline mixture.

15th. Better. ℞. Saline mixture—magnes. calc. ʒij.

16th. Better to day. ℞. Saline mixture.

17th. Better—Saline mixture. 18th. Better to day. ℞. Saline mixture. 19th. Discharged.

28th. James Conner, æt 33, South street. Diarrhea for the last 24 hours—sickness and pain at the stomach—spasms of the legs; vomited yesterday and to day (rice water;) tongue furred and white; pulse full; urinated yesterday, not to day; extremities warm. ℞. Saline mixture every hour. ℞. Calomel grs. x, Nitre grs. v. m., one every hour—Fiat venesectio ℥ xxiv.

29th. Better to day: bowels well opened; tongue cleaner; pulse good; urinated. ℞. Calomel grs. viij, aloes grs. v. m., one every 2 hours.

30th. Better to day: pulse good; urinated; tongue cleaner; bowels open. ℞. Ol. ricini in the morning.

September 1st. Much better to day: tongue much cleaner; pulse and skin good; bowels open; urinated. ℞. Ol. ricini ℥ ij: Nitrous mixture.

2d. Much better to day: tongue cleaner; pulse good; bowels open; urinated, &c. ℞. Saline mixture every 2 hours.

3d. Improved: tongue cleaner; pulse good. ℞. Saline mixture.

4th. Convalescing. 5th. Convalescing. 6th. Convalescing.

7th. Convalescent. 8th. Discharged.

28th. Airy Neilson, æt 31, George street. Bowels affected for three days past: rice water discharges to day: threw up her breakfast; spasms of the arms and legs; oppression at the precordia; pulse feeble; tongue furred, white and warm; hands moderately warm; feet cold—was bled by doctor Hall—had taken 15 grs. calomel, and j gr. opium, which she threw up—Took just before coming in, calomel grs. x. ℞. Saline mixture every hour. ℞. Submur. hydr. grs. x, opii grs. ij m. ℞. Calomel grs. x, Nit. potas. grs. v. m., one every ½ hour for 3 doses, then every hour: Sinapism to the epigastrium.

29th. Died last night.

30th. Priscilla Thompson, æt 57, Tyson alley. Was taken last night with griping and purging, rice water discharges; bowels affected since Friday; cramps in the legs and hands; pulse feeble; tongue furred, slightly white and cold; extremities cold; voice husky; ℞. Submur. hydr. grs. x. nitre grs. v. m., one every ½ hour for 5 doses, then every hour—Saline mixture every hour; extremities rubbed with the warm lard—*

* September 1st. (omitted) P. Thompson, in a state of coma; face bathed in sweat; hands moderately warm; pulse pretty good; Fiat venesectio ad ℥ xx; very black and thick.

September 2d. Died last night at 11 o'clock.

30th. Charles Pogen, æt 57, Paca St. Complains of pain in his limbs; bowels bound; tongue slighly furred, pulse pretty good; had slept in a lumber yard last night; lives near Reistertown. ℞. Ol. ricini ʒ ij.

September 1. Discharged.

September 2d. John Warner, æt 46, Bridge St. Broke his arm on Sunday afternoon; bowels affected for three weeks past; dysentery; pulse full and hard; tongue furred and yellow; spasms of the stomach last night and prior to that time; pain in the head and back; had eaten apples before his bowels became affected, and frequently since. ℞. Calomel grs. x, nit. potas m. v. m., one every hour—Saline mixture every hour.

3d. Arm better, not so much swelled; tongue cleaner; bowels improved. ℞. Ol. ricini ʒ ij.—Saline mixture; cold applications to the arms.

4th. Arm not so much swelled; tongue clean; cold application to the arm—Saline mixture.

5th. Arm better; and better in every respect. ℞. Saline mixture; cold applications to the arm.

6th. Arm better; the swelling nearly gone; can move it well and not so painful. ℞. Saline mixture; cold application. ℞. Dovers' powder at night.

7th. Arm better to day. ℞. Saline mixture; cold application.

8th. Arm much better to day; Saline mixture; liniment.

9th. Arm better; liniment. 10th. Arm better; liniment.

11th. Arm better; cold application. 12th. Arm better; cold applications.

13th. Arm better; cold application. 14th. Arm better; cold application.

15th. Arm better. 16th. Arm better; liniment.

17th. Arm better. 18th. Arm better; liniment. 19th. Arm better.

20th. Arm better. 21st. Arm better; liniment. 22d. Arm better.

23d. Arm better; liniment. 24th. Arm better.

3d. Mahala Twiggs, æt 43, Biddle alley. Has been unwell for two weeks past; sickness at the stomach; a vomiting; spams of the stomach, arms and legs at that time; tongue furred and yellow; pulse feeble and frequent; bowels opened thro' the morning; and in the evening; (rice water) has been under the care of Dr. Richardson. ℞. Calomel grs. viij. nit. potassæ grs. v. m., one every hour—Saline mixtue.

4th. Better to day; stools bilious; pulse good; tongue still furred, &c. ℞. Rhubarb and aloes—Saline mixture.

5th. Better to day; tongue still furred; bowels opened; stools bilious. ℞. Rhubarb and aloes—Saline mixture.

6th. Better to day; tongue still furred; bowels opened; pulse good; urinated. ℞. Rhubarb and aloes—Saline mixture.

7th. Better to day; tongue a little cleaner; bowels open; pulse good; urinated. ℞. Rhubarb and aloes—Saline mixture.

8th. Tongue cleaning off; pulse good; bowels open; urinated. ℞. Rhubarb and aloes—Saline mixture.

9th. Much better; tongue cleaning; pulse good; bowels open; urinated. ℞. Rhubarb and aloes—Saline mixture.

10th. Much better; tongue nearly clean; pulse good; bowels open; urinated. ℞. Saline mixture every 2 hours.

11th. Much better; tongue cleaner; pulse good; bowels open; urinated. ℞. Saline mixture—Pulv. Doveri gr. 12.

12th. Much better; tongue cleaner, bowels open; pulse good, &c. ℞. Saline mixture.

13th. Much better; tongue cleaner; bowels open; pulse good. ℞. Aloes and rhubarb—Saline mixture.

14. Much better; tongue cleaner; bowels open; pulse good, &c. ℞. Saline mixture.

15th. Convalescing. ℞. Saline Mixture.

16th. Convalescing. ℞. Saline mixture.

17th. Convalescing. ℞. Saline mixture every 2 hours.

18th. Convalescing. ℞. Saline mixture. 19th. Convalescent.

20th. Discharged.

3d. Martha Ann Twiggs, æt 19, north Biddle St. Cholera Infantum. ℞. Colomel grs. ij. m., one every 2 hours.

4th. Better to day; powders continued.

5th. Convalescent.

4th. Wm. Henry, æt 19, Maddison St. Vertigo; sickness at the stomach; pain in the back and stomach; pulse good; tongue furred and yellow. ℞. Calomel and jalap.

5th. Better to day; tongue cleaner; pulse good, &c. ℞. Ol. ricini ℥ ij.

6th. Discharged.

7th. Michael Keene, æt 38, Eutaw street. Was taken yesterday morning with purging, &c.; dysentery; pain in the head and back; spasms of the stomach and legs; pulse full; tongue furred and white; ate green cucumbers, and greens—4 days ago, and apples the day before yesterday; was discharged from Hospital, No. 3, five days ago, and from the Hospital No. 1, about 16 days ago. ℞. Submur. hydr. grs. viij. nit. potassæ grs. v. m. one every hour—Saline mixture every hour—Fiat. venesectio ad ℥x.

8th. Vomited this morning; (rice water,) spasms removed; bowels opened, sometime after; stools bilious; urinated; tongue furred; saline mixture every hour. ℞. Calomel grs. vj, every hour.

9th. Much better; tongue better; pulse good; urinated; bowels open; stools bilious. ℞. Rhubarb xj. aloes grs. v. m. one every 2 hours—Saline mixture.

10th. Much better; tongue cleaner; pulse good; bowels open; urinated. ℞. Saline mixture every 2 hours.

11th. Much better: tongue cleaner; pulse good; bowels open; urinated. ℞. Saline mixture—Pulv. Doveri grs. xij.

12th. Much better to day; tongue still furred; bowels open; pulse good, &c. ℞. Saline mixture.

13th. Much better to day; tongue still furred; bowels open; pulse good. ℞. Rhubarb and aloes—Saline mixture.

14th. Much better; tongue rather cleaner; bowels open; pulse good, &c. ℞. Rhubarb and aloes—Saline mixtnre.

15th. Much better; tongue cleaner; bowels open, &c. ℞. Saline mixture.

16th. Much better; tongue nearly clean; bowels open, &c. Saline mixture.

17th. Much better; tongue clean; bowels open, &c. ℞. Saline mixture.

18th. Much better; tongue cleaner; bowels open—Saline mixture.

19th. Much better. ℞. Saline mixture.

20th. Convalescing.

21st. Complains some of a pain in the stomach; pulse good; tongue slightly furred. ℞. Calomel grs. x. oil ℥ij.

22d. Better to day. ℞. Oil ricini ℥ ij. Saline mixture.

23d. Better to day. ℞. Saline mixture.

24th. Better to day. ℞. Saline mixture.

9th. Mary McGotten, æt 35, Union street. Has been unwell for three days past; cough; pain in the head and breast; bowels affected for two weeks past; had a fit before coming in; and five afterwards; tongue furred; pulse pretty good. ℞. Ol. ricini ℥ij. sinapism to the breast and back.—Fiat. venesectio ad ℥ xij.

10th. Much better to day; bowels opened; tongue cleaner; pulse good; rested well through the day. ℞. Saline mixture. P. S. Ranaway this evening.

15th. Randolph Johnson, æt 24, Ruxton lane. Was taken yesterday evening with vomiting and purging; (rice water,) bowels affected for some time past; spasms of the stomach and legs; tongue furred, white and cool; pulse not perceptible; extremities cold; was prescribed for by doctor Miller, but cannot say what was given; has been eating vegetables and fruit, during the

whole time that this disease has been in the city. ℞. Saline mixture every hour. ℞. Calomel and opium. ℞. Calomel and nitre every half hour—extremities rubbed with the lard.

11th. Died this morning about 2 o'clock.

15th. James Kenny, æt 29, Light street. Was taken yesterday with vomiting and purging; (rice water,) spasms of the stomach; pain in the head and back; pulse small; tongue furred and yellow, and warm; extremities warm; urinated this day; eat chestnuts on Saturday evening last. ℞. Saline mixture every hour. ℞. Calomel grs. x. nitras. potas. 5 grs. m., one every half hour, for several doses—then every hour. ℞. Ol. croton gtt. 1½.

16th. Better to day; tongue furred; pulse pretty good; bowels opened; passages bilious; stomach still irritable; urinated. ℞. Pulv. opii grs. ij. ℞. Submur. hydr. grs. viij. nit. potas. grs. v. m., one every 2 hours—saline mixture every 2 hours.

17th. Rather better to day; tongue still furred; pulse better; stomach still irritable; urinated; bowels open. ℞. Pulv. rhei grs. x. aloes grs. v. m., one every 2 hours—Saline mixture emp. epispas. to the stomach.

18th. Much better; stomach more quiet; tongue cleaner; pulse good; bowels open; urinated. ℞. Saline mixture, emp. epispas. to the stomach.

19th. Bowels not open; stomach quiet; tongue rather cleaner; pulse excited; urinated. ℞. Calomel grs. x. ℞. Ol. croton, gtt. ij. nitrous mixture.

20th. Pulse full; bowels open; urinated; tongue rather red; there appeared to be determination to the head. ℞. Submur. hydr. grs. viij. nitre grs. v. m., one every 2 hours.—Fiat. venesectio ad ʒ xij.

21st. Pulse good; tongue slightly furred. ℞. Calomel grs. x. oil ʒ ij.

22d. Better to day. ℞. Nitrous mixture every 2 hours.

23d. Better to day—Nitrous mixture every 2 hours.

24th. Better to day. ℞. Saline mixture.

18th. Hugh Hurleston, æt 42, Eutaw street. Was taken on Monday night with vomiting and purging, (rice water) and continues; had spasms of the stomach, arms and legs; pain in the head and back; pulse barely perceptible; tongue furred; yellow, and moderately warm; had eaten cabbage. ℞. Saline mixture every hour. ℞. Cal. and nitre, 10 and 5, every hour. ℞. Ol. croton gtt. ij. sinapism to the stomach and legs—died at 7 o'clock in the morning.

18th. Thomas H. Brown, æt 37, Bond street. Was taken 3 days ago, with vomiting and purging; (rice water) vomiting to

day bilious; spasms of the stomach and legs; pain in the head and back; pulse full; tongue furred and yellow; urinated; took before coming in pepper and water; had eaten apples the day before. ℞. Saline mixture. ℞. Calomel and nitre 10 and 5 grs. threw it up ℞. Calomel grs. x. ft. pil. threw it up also. ℞. Ol. croton, gtt. ij.—Fiat. venesectio ad ℥xvj.

19th. Stomach irritable in the morning; but quiet in the afternoon; bowels open; tongue furred; urinated; pulse good. ℞. Calomel grs. x. at night.

20th. Rather better to day; tongue clean; pulse good; bowels slightly opened; urinated. ℞. Subm. hydr. grs. viij. nitre grs. v. m., one every 2 hours.

21st. Much better; tongue cleaner; pulse good; bowels open, &c. ℞. Nitrous mixture every 2 hours.

22d. Convalescing—nit. mixture. 23d. Convalescing.

24th. Convalescent.

21st. John H. Mull, æt 14, (Market street road.) Was taken 3 days ago, with vomiting and purging, (rice water,) continued so until this morning; spasms of the stomach, arms and legs; tongue warm; pulse good; hands moderately warm; feet cold; pain in the head and back; has eaten nothing improper; had been prescribed for by doctor Hall. ℞. Saline mixture every hour. ℞. Calomel grs. viij. nitre grs. v. m., one every 2 hours.

22d. Complains of his head; tongue rather cleaner; pulse pretty good; bowels open; urinated. ℞. Submur. hydr. grs. viij. nit. potassæ grs. v. m., one every 2 hours.—Emp. epispas. to the back of the neck.

23d. Complains still of his head; tongue dry and furred; pulse sometimes through the day intermits; bowels opened; stools very bilious. ℞. Ol. ricini ℥ ij. ℞. Submur. hydr. grs. viij.—nitre grs. v. m., one every 2 hours—Saline mixture every hour.

24th. Rather better to day; pulse better; tongue still furred, but more moist; bowels open; urinated. ℞. Subm. hydr. grs. v. m., one every 2 hours—Saline mixture.

21st. Sarah Mull, æt 38, (Market street road.) Was taken with vomiting and purging, (rice water,) some days back, has ceased now; pulse small; tongue warm; slightly furred; hands warm; feet cold; ate sweat potatoes on Friday; has been attended by doctor Hall, during all the time. ℞. Saline mixture every hour—took some calomel to day from doctor Hall.

22d. Better to day; pulse pretty good; tongue cleaner. ℞. Saline mixture.

23d. Better to day. ℞. Saline mixture—Quinine mixture.

24th. Convalescing.

23d. Susan Aitkin, æ 42, Park lane. Was taken last Wednesday, with vomiting and purging; (rice water,) cramps of the

arms, legs and stomach, vomited none since yesterday morning; pain in the head and back; pulse very feeble; tongue furred, yellow and moderately warm; extremities cold; ate cabbage, pork and roasted apples, the evening before taken ill; has been under the care of doctor Hall. ℞. Saline mixture. ℞. Calomel grs. viij. nitre grs. v. m., one every hour—sinapism to the stomach and legs.

24th. Bowels not opened; tongue furred; pulse rather better; skin dry and corrugated. ℞. Ol. ricini ʒ ij. ℞. Calomel grs. viij. nit. potassæ grs. v. m. one every 2 hours—Saline mixture.

23d. William Lucas, æ 37, Marsh Market. Was taken yesterday with vomiting and purging; spasms of the legs, arms and stomach; pulse feeble; tongue furred white; and warm; feet cold; pains in the head and back; had eaten sweet potatoes, cabbage and other things. ℞. Saline mixture every hour. ℞. Calomel grs. x. opii grs. ij. m. ℞. Calomel grs. viij. nitras potassæ grs. v. m., one every half hour—for 4 doses, then every hour—sinapism to the stomach.

24th. Absconded to day.*

Reports of cases of Epidemic Cholera received at the Maryland Hospital: now known as Hospital No. 1. for Cholera patients.

This institution was opened for the reception of cholera patients, on the 10th of July, 1832, in consequence of the existence of cholera at New York, and some intimations of its appearance in Philadelphia. No patients were received during the month of July—the first patient was admitted on the 4th of August, as appears by the records kept by doctor George Mackenzie, hospital physician for hospital No. I. We proceed to copy the said records.

Maryland Hospital—No. 1., for the Summer 1832.

Saturday, Aug. 4. Admitted ½ past 9 A. M. John Grove, negro, æt. 38. Had slept the night preceding in a lot near Ruxton Lane; symptoms; cramps of the extremities and abdomen; purging of a light greenish mucus of the consistence of thick barley water; tongue brown, edges and tip red; pulse feeble; surface cold. ℞. supercarb. sodæ ʒj, tinct. opii. lxx. Ol. sassafr. gt. v. aq. puræ. ʒ vj—Take a table spoonful every hour.

Sunday 5th. Cramps abated; pulse improved; evacuations the same, but not so frequent. ℞. Subm. hydr. gr. xvj. camphor gr. viij. m. ft. char. no. iv. Take one every two hours and continue the mixture.

* See Appendix letter C.

Monday 6th. Cramps gone, pulse improved, dark bilious evacuations. ℞. Submur. hydr. gr. x. ft. pulv.—5 hours after, Ol. ricini. ℥ ss. Continue mixture every two hours.

Tuesday 7th. Pulse more full, less frequent, tongue improved; has had three evacuations nearly natural. ℞. Nitr. pot. gr. xxxvj., camphor gr. xij., ft. chart. vj. Take one every 3 hours; continue the mixture 3 times daily. Thursday, convalescent—eloped on Monday 20th.

Wednesday, 8th August. Admitted ¼ past 12, noon, Thomas Brown, negro, æt 75. Had eaten yesterday before dinner a number of green apples, and drank a considerable quantity of cold water, was taken in the night with severe vomiting and purging and violent cramps of the extremities and abdomen; for the relief of which at daylight he drank ½ pint raw whiskey. When admitted, the vomiting and purging had ceased; pulse scarcely perceptible; surface cold; eyes sunken; tongue white; cold edge; and tip red; abdomen distended; respiration difficult; skin of hands and fingers corrugated. Bags filled with hot sand were applied generally; an enema of hot salt and water was thrown into the rectum. A table spoonful of the above mixture was given every hour without effect, and at ¼ past 3 o'clock P. M. he expired; about half an hour before death, a vein was opened in his arm, and although the orifice was very large, but a small quantity could be obtained; it was very thick, and when stirred on the side of the bason had the appearance of raspberry jelly; the coagulum was like black japan, there was no separation of its particles, the stain on the linen terminated abruptly without the usual stain of the serous portion.*

Friday 10th. August. Admitted, 8 o'clock Thomas Meredith, imtemperate, æt 46. Had eaten yesterday a watermelon and drank a considerable quantity of cold water, had slept all night in the market house, and awoke with a violent pain in the stomach; for the relief of which he drank some mint sling, and immediately afterwards was seized with violent vomiting and purging. When admitted he was purging and vomiting a light watery fluid: severe cramps of the legs: pulse feeble and frequent; tongue white; pain in epigastrium; surface cool. ℞. Mist. saline, a table spoonful every hour, which allayed the vomiting. ℞. Hydr. submur gr. xv., pulv. opii gr. j. m.

Saturday 11th. Has had a free bilious evacuation of good consistence; cramps considerably abated; pain in the stomach gone; pulse feeble less frequent; urine scanty. ℞. nitr. potass. grs. xxxij. gum camphor grs. xvj. m. ft. cha. vj, one every three hours.

Sunday 12th. Urinary passages more free; pulse improved,

*See Appendix letter D.

more full; evacuations dark. ℞. Hydr. Submur. nitr. potass. aa xlviij. m. ft. chart. vj. one every three hours.

Tuesday 14th. Slept well all night; pass urine freely; evacuations of a more natural color; pulse improved; continue powders.

Wednesday 15th. ℞. Ol. ricini. ʒ ss.

Friday 17th. Convalescent.

Monday 20th. Discharged.

Tuesday 17th. Admitted 7 o'clock P. M. John Bayly, negro, æt, 17. Intemperate, had eaten during the day a very considerable quantity of watermelon; about 4 o'clock he went into the water in a profuse perspiration, shortly after was seized with violent cramps; vomiting and purging; the following prescription was given him by Dr. Hintze. ℞. Hydr. submur. vj. gum camphor gr. iv. pulv. opii. gr. vj. m. When admitted he was extremely prostrate; respiration exceedingly laborious; eyes sunken, pulseless, surface cold, tongue white and cold, skin on hands and feet corrugated, nails purple. Bags of hot sand were applied generally. Stimulating injections, &c. were used without effect, and at 9 o'clock P. M. he expired.

Post mortem appearances; the stomach and intestines were very much inflamed, the stomach particularly; there were 3 large dark patches on the mucous coat resembling incipient gangrene; the liver pale; the gall bladder was nearly full of dark green bile; the heart contained a considerable quantity of thick black blood; the bladder was contracted to a very small size; there was no urine in the pelves of either kidney.

Wednesday 15th. August. Admitted ½ past 10 o'clock A. M. Israel Clark, æt, 40. Of intemperate habits; had eaten freely of watermelon yesterday; when admitted had severe cramps of the abdomen and extremities, vomiting and purging of a fluid resembling rice water—tongue white; surface cold; pulse feeble; had passed a small quantity of urine early this morning. ℞. Mixt. saline—a table spoonful every hour which allayed the vomiting. ℞. Hydr. submur. ʒ ss. pulv. opii. grs. iij. m. ft. pil. iij., one every three hours—Bags of hot sand were applied generally.

Thursday 16th. Had 2 or 3 evacuations during the night, which were dark but fluid—cramps abated—pulse improved—a small quantity of urine passed. ℞. Hydr. submur. pulv. nitr. potass ana ʒss. m. ft. cha. ij.: one every three hours.

Friday 17th. Great restlessness; had 4 dark fluid evacuations; tongue white; surface cold; pulse very feeble; a small quantity of urine passed. ℞. Hydr. submur. grs. xxiv. gum camphor grs. xij. m. ft. cha., one every 2 hours, sinapisms to the extremities. ℞. Carb. ammoniæ ʒij. puv. gum arabic ʒj. aq. menthæ ʒ iv. m. a table spoonful intermediately with the powders, which treatment

was continued until ½ past 2 P. M. to day, (Saturday) when he expired.

Post mortem appearances; the stomach, and small intestines very much inflamed; the liver pale, very much enlarged and soft; the gall bladder partly filled with dark green bile; no urine in the pelves of the kidnies: the bladder was contracted to a very small size; there was nearly 4 ounces of water in the pericardium; there was a small quantity of black blood in the abdominal aorta.

Thursday, August 16th, Lambert Hawkins. Admitted ½ past 10 A. M., a negro, æt. 60, collapsed; great restlessness; severe cramps of the extremities; surface cold; eyes sunken and turned up; tongue white and cold; edges and tip blue; skin of hands and feet corrugated; nails purple; pulse scarcely perceptible: bags of hot sand were applied generally: sinapism to the epigastrium: a table spoonful of the following. ℞. Ol. terebinth, ol. ricini ana ʒ j. m., was given every hour without effect, and at ½ past 12 P. M. he expired.

Thursday, August 16th. Admitted 10 o'clock P. M. Thomas H. Brown, æt 38, was brought from Fell's Point market, has been drinking freely for 3 weeks past, very much intoxicated when admitted; vomiting and purging; tongue covered with a thick white fur, except the edges and tip, which were red; pulse full and frequent. ℞. Mixt. saline—a table spoonful every hour.

Friday 17th. Vomiting and purging ceased; violent cramps in the legs; abdomen tender to the touch; pulse full and frequent; no urine passed. ℞. Hydr. submur. pulv. nitras. ana ʒss. m. ft. cha. iij., one every 3 hours—a large sinapism to be applied to the abdomen.

Saturday 18th. Medicine operated twice: abdomen not so tender; tongue the same; pulse full, but less frequent; a small quantity of urine passed—continue the powders.

Sunday 19th. Has had 4 or 5 dark bilious evacuations; tenderness of abdomen gone; pulse improved; less frequent; tongue cleaner; passes his urine tolerably free—continue nitre and calomel every 4 hours.

Monday 20th. Bowels freely purged; urine passes freely—pulse nearly natural.

Wednesday 21st. Convalescent. 27th. Discharged.

Friday, August 17th. Jane Ringgold, æt 23, Frederick street. Admitted ½ past 11 A. M.—has had diarrhea for 4 or 5 days; was seized this morning with violent cramps of the extremities, with vomiting and purging: when admitted she was vomiting and purging a fluid, resembling rice water; cramps of the arms and legs; eyes sunken; surface cold; tongue white: says she passed urine this morning; a table spoonful of the saline mixture was given every hour; sinapisms to the epigastrium and spine; bags

of hot sand to the extremities. ℞. Hydr, submur. ℈j. pulv. opii gr. ij. m.

Saturday 18th. Vomiting and purging not so frequent; evacuations darker, but still very fluid; cramps not so violent; pulse improved; surface warm; no urine passed. ℞. Submur. hydr. grs. xxxij. ft. charta. vj.—one every 2 hours, with a tea spoonful of acet. scillæ between each powder.

Sunday 19th. Evacuations darker, and of better consistence; vomiting and purging not so frequent; cramps abated; pulse improved; a small quantity of urine passed—treatment same as yesterday.

Monday 20th. Mouth sore from the medicine; pulse rather frequent; more urine passed than yesterday. ℞. Spt. æther nitros. ʒ ij., a tea spoonful every 2 hours, with 20 drops tinct. opii, continued powders every 4 hours.

Tuesday 21st. Mouth excessively sore; great stupor; answers questions very indistinctly; constant moaning; pulse irritated; passed urine once during the night, and in small quantity—take a tea spoonfnl spt. of nitre every 2 hours—which was continued untll to day (Thursday) when she expired at 10 o'clock P. M.

Sunday August 19th. John Coats, æt 40. Admitted ½ past 9 A. M. Albemarle street. Very intemperate; had been eating watermelon and drinking freely yesterday; about 3 o'clock P. M. was seized with vomiting and purging; has walked the yard all night with no other covering than his shirt; had drank from sunrise, to the time of admission 7 glasses of whiskey and water; when admitted was complaining of severe cramps of legs, and arms; vomiting and purging a fluid, resembling dirty rice water; tongue dark, covered with a brown fur, and cold; surface cold and covered with clammy sweats; pulse very feeble; great thirst; passed urine this morning. ℞. Hydr. submur ℈j. pulv. opii grs. iij. to be taken immediately; bags of hot sand to be applied to the extremities; sinapism to the epigastrium. ℞. Tinct. meloe vesicat. ʒ iv., 2 tea spoonsful every 2 hours, until 4 doses shall have been taken—then one tea spoonful every 2 hours, until symptoms of stranguary be produced.

Monday 29th. Had 2 evacuations of a dark green color; pulse frequent and feeble; skin feels warm; tongue same; cramps abated; a small quantity of urine passed; no symptom of stranguary. ℞. Hydr. submur. grs. xxxvj. ft. cha. vj., one every 2 hours: continue tincture.

Tuesday 21st. Complains of pain around the umbilicus; pulse feeble; skin cold and livid; nails purple; tongue cold; eyes sunken; breath has the mercurial fetor: no stranguary; continue calomel with 2 tea spoonsful tinct. canther. every 2 hours—a sinapism to the abdomen.

Wednesday 22d. Slept none; great jactitation; surface cold; eyes turned upwards; pulse scarcely perceptible; mouth very sore; no symptom of stranguary; evacuations dark, and fluid—the tinct. was continued every 2 hours without effect—and at 5 o'clock P. M. he expired.

Monday 20th August. Maria Carnes, æt 30, E. Water street. Admitted ½ past 11 A. M. Was taken a week ago with vomiting and purging; of which she was relieved; the disease was brought on the second time by exposure and imprudence in diet; had taken previous to admission, ʒss. calomel, and 60 drops tinct. opii in 3 doses—when admitted complained of pain in the head; nausea; abdomen tender to the touch; pulse full and frequent; no urine passed since yesterday. ℞. Hydr. submur. pulv. nitrat. potas. ana ʒss. m. ft. cha. iij., one every 3 hours—sinapism to the abdomen. ℞. Mixt. saline, a table spoonful every hour.

Tuesday 21st. Medicine has operated freely; evacuations of a dark green color, of good consistence; urine passes tolerably free; pain in the head abated: tongue white; pulse not so frequent: nitre and calomel every 4 hours—mixt. saline every 3 hours.

Wednesday 22d. Passes urine quite freely; tongue improved; pulse nearly natural.

Friday 24th. Slight pain in the head: produced by eating a piece of warm bread; pulse frequent. ℞. Hydr. submur. pulv. aloes, socot. ana grs. x. m. ft. pil. ij., both to be taken immediately.

Monday 27th. Discharged.

Monday 20th August. Jane Thomas, æt. 50, Front street, admitted 6 o'clock P. M. Collapsed: bags of hot sand applied. ℞. Ol. ricini, ol. terebinth ana ʒ ij., 2 table spoonsful every two hours.

Tuesday 21st. Died at 5 o'clock A. M.

Monday 20th August. Edward Murphy, æt 39, admitted 10 o'clock A. M. Has been affected with looseness of the bowels for 4 days: when admitted had severe headach: pain in the stomach, evacuations light and watery, containing a small quantity of blood: pulse full and frequent: no vomiting. ℞. Hydr. submur. ʒss. pulv. Doveri ℈j. m. ft. cha., one every three hours, not having operated at 6 P. M., took ol. ricini ʒ ss.

Tuesday 21st. Bowels freely purged: evacuations resembled tar: tongue furred: complain of acidity of stomach: passes urine freely. ℞. Mixt. saline, a table spoonful every two hours.

Wednesday 22d. Evacuations not so dark: no acidity of stomach: tongue same. ℞. Hydr. submur. ʒ ss. ft. cha. iij,, one every 4 hours—mixt. saline 3 times a day.

Thursday 23d. ℞. Ol. ricini ʒ ss.

Saturday 25th. Convalescent. Discharged 4th September.

Tuesday 21st August. Christiana Heirman, æt 39, Albemarle street, admitted ½ past 10 A. M. Was seized this morning early with vomiting and purging: with violent cramps, for which she was bled with great relief by doctor Lyon: when admitted, the vomiting had ceased: purging a light fluid, resembling rice water: tongue white: surface cold: pulse feeble: passed urine this morning. ℞. Hydr. submur. grs. xxxvj., one every two hours.

Wednesday 22d. Symptoms same as yesterday: very little urine passed. ℞. Hydr. submur. pulv. nitrat. potass. ana ʒss. ft. charta vij., one every two hours, intermediately mixt. saline every hour.

Thursday 23d. Bowels freely purged: evacuation dark, but fluid: tongue still furred: pulse not so feeble: urine passes tolerably free—continue calomel and nitrat. potas., every four hours; mixt. saline, 3 daily.

Friday 24th. Mouth sore: pulse much improved: tongue clean: skin feels nearly natural. ℞. Ol. ricini ʒ ss. mixt. saline, three daily.

Sunday 26th. Convalescent. Discharged 31st August.

Wednesday 22d August. Miller Mattox, negro, æt. 28, admitted ½ past 7 A. M. Collapsed: bags of hot sand to be applied generally. ℞. Ol. ricini, ol. terebinth, ana ʒ ss., to be given every hour, without injections—died ¼ before 10 A. M.

Wednesday 22d August, Ann —— negro. æt 30, High street, admitted 10 o'clock A. M. Collapsed: was seized with vomiting and purging, with violent cramps yesterday evening about 8 o'clock: had been out two nights previous on a debauch—Saline emetics: sinapism to the spine and epigastrium: could obtain no blood—died at 3 o'clock P. M.

Wednesday, 22d August. Mary McGavus, white, admitted at 10 o'clock, A. M., (South street.) Has had chills and fevers for a week past—was taken this morning with vomiting and purging—when admitted, vomiting had ceased—purging, of a light watery fluid; pulse feeble; complains of slight cramps in the left leg; pain in the stomach. ℞. Hydr. submur. grs. xv, pulv. opii grs. iss., m. ft. pulv., mixt. saline: a table spoonful every 2 hours.

Thursday, 23d. Purging continues; cramps abated; pulse feeble; tongue white; passes urine. ℞. Hydr submur. ʒss, ft. cha. vj., one every 2 hours—mixt. saline as before.

Friday, 24th. Has had several dark bilious passages; tongue improved, not so much furred; had a chill yesterday at 6 P. M., followed by fever; feels much better to day. ℞. Hydr. submur.

℥ss, pulv. cinchon. grs. xij, m. ft. cha. vj., one every 2 hours—mixt saline occasionally.

Saturday, 25th. Mouth sore: tongue cleaner; evacuations dark: continued calomel and sulph. quinine.

Sunday, 26th. Missed her chill yesterday: mouth very sore—no evacuation since yesterday afternoon. ℞. Ol. ricini ℥ss.

Tuesday, 27th. Convalescent.

Wednesday, Aug. 22d. William Oliver, white, æt. 33, Jackson's wharf. Admitted 10 o'clock A. M.—was attacked yesterday morning with vomiting and purging, which lasted until 3 o'clock, P. M., when he was seen by doctor Morris, who found him "in a perfect state of cholera collapse:"—he has taken 20 grains calomel and 5 grains quinine, and every hour after 10 grs. calomel and 3 grs. quinine, until 5 o'clock this morning. The doctor has given him a table spoonful of the following every hour:—℞. Carbon. ammoniæ, gum camphor ana grs. xxiv, pulv. gum arabic ℥ij, aq. menthæ ℥vj—Shortly after admission he had a small watery evacuation of a dark brown color—pulse feeble; tongue covered with a light brown fur; surface warm; complains of slight pain in the stomach—does not recollect of having passed any urine since he was taken sick. ℞. Hydr. submur. pulv. nitrat. potas. ana ℥ss. m, ft. cha. iij, one every 2 hours—mixt. saline, a table spoonful every hour—hot sand to the extremities.

Thursday, 23d. Has had several dark bilious evacuations—tongue brown; pulse improved; passed a small quantity of urine early this morning—continue calomel and nitre every 3 hours: mixt saline as before.

Friday, 24th. Bowels purged freely—evacuations of a dark green color, and very offensive: passed urine twice pretty freely; tongue black; complains of nothing but weakness of stomach—mixt. saline occasionally.

Saturday, 25th. Has had no evacuations from his bowels since yesterday morning; tongue brown; urine passes freely.—℞. Hydr. submur. pulv. aloes ana gr. x m., ft. pil. ij: both to be taken immediately—10 P. M., medicine not having operated, repeated the dose.

Sunday, 26th. Medicine acted pretty freely—two last evacuations more natural; tongue much cleaner: complains of nothing but weakness and slight soreness of the mouth—mixt. saline occasionally. Tuesday, 27th. Convalescent.*

Wednesday, Aug. 22d. Levi Grimes, white, æt. 55, Lancaster street. Admitted 8 o'clock P. M., intemperate—has a severe bowel complaint for 5 or 6 days; was taken yesterday morning with severe vomiting and purging, and violent cramps—has

*See Appendix letter E.

taken no medicine—when admitted he was vomiting and purging (rice water), with severe cramps; tongue white and cold—pulse scarcely perceptible; great thirst; surface cold. ℞. Hydr. submur. ℈j, pulv. opii gr. iv m., ft. cha. ij, one every 2 hours—mixt saline, a table spoonful every hour—sinapism to the epigastrium; hot sand to the extremities.

Thursday, 23d. Pulse more perceptible—vomiting not so frequent; the purging still continues; cramps abated; tongue feels warm; very restless. ℞. Hydr. submur. ℥ss, sulph. quinine gr. vj m, ft. cha. vj., one every 2 hours.

Friday, 24th. No vomiting: purging not so frequent as yesterday, but still watery; tongue brown and dry; pulse feeble.—℞. Carb. ammonia ℈ij, sacchar. alb., pulv. gum. arab. ana ℥j, aq. menthæ ℥iv, a table spoonful every two hours—calomel and sulph. quinine as yesterday.

Saturday 25th. Symptoms same as yesterday: no change in the evacuations. ℞. Ol. ricini ℥ss.—continue mixture.

Sunday, 26th. Has had 2 or 3 evacuations, darker than the last—stupor; complains of no pain; pulse very feeble. ℞. Hydr. submur. ℥ss, ft. cha. vj, one every 3 hours—mixture as before—blister to the neck.

Monday, 27th. Stupor greater than yesterday; eyes turned up, pupils dilated; difficulty of breathing: no evacuation since last night; pulse very feeble. ℞. Hydr. submur. sulph. quinine ana grs. xij m., ft. cha. xij, one every 3 hours—blister to the stomach as before.

Tuesday, 28th. Great difficulty of breathing: stupor very great, squinting; evacuations pass involuntarily; pulse extremely feeble: treatment same as yesterday, and continued until this morning (Thursday) when he expired.

Thursday, Aug. 23d. John Dowling, negro, æt. 60. Admitted ½ past 8 A. M., collapsed—was brought from Bel-Air market house, where he had slept all night—has been eating freely of green apples and watermelons. Died at 2 P. M.

Friday, 24th Aug. Samuel Geddes, æt 22, white, Frederick street. Admitted ½ past 2 P. M.—has been eating fruit, and drinking freely for some days past—was taken yesterday with vomiting and purging, with cramps of the extremities, &c.—has had no medicine—when admitted, he was vomiting and purging (rice water); severe cramps; tongue cold; pulse very feeble.—℞. Hydr. submur. ℈j, pulv. opii gr. iij m., to be taken immediately: hot sand to the extremities—sinapism to the epigastrium.

Saturday, 25th. Very restless—vomiting and purging not so frequent—complains of no pain: has passed no urine since admission. ℞. Hydr. submur., pulv. nitrat., potass. ana ℥j, m. ft. cha. vj, one every 3 hours—mixt. saline a table spoonful every hour.

Sunday, 26th. Quite delirious—says he is quite well, and wishes to go home; pulse very feeble and frequent: eyes suffused; tongue brown and dry; evacuations watery, but not so frequent: blisters to the neck and extremities---continue calomel and nitrate potassæ.

Monday, 27th. Has had several free evacuations, watery; stupor; pulse very feeble---a pint of hot water, with ʒss acetate of lead, and ʒss. laudanum as an enema, to be repeated as often as may be necessary.

Tuesday, 28th. The enemata have checked the discharges in some degree; no improvement of the other symptoms, and at ½ past 2 P. M. he died.

Appearances after death: The mucous coat of the stomach and intestines was very much inflamed, and could easily be scraped off with the handle of the scalpel; the liver was paler than usual and very large; the gall bladder was distended with dark green bile; the spleen was quite small; the bladder contracted to the size of a small walnut—had not time to make further examination.

Friday, 24th Aug. Ann Berry, negress, æt. 30, Kipp's alley. Admitted ½ past 1 P. M. Collapsed—died two hours after admission.

Friday, 24th Aug. William Montwell, æt. 27, white. Admitted ½ past 7 P. M.—Intemperate, was found lying near the Exchange intoxicated; has had bowel complaint for two days: when admitted was under the influence of liquor; purging, of a light watery fluid; pain in the stomach; tongue furred; pulse full and tense, V. S. ℞. Hydr. submur. ϑj, pulv. opii gr. ij.

Saturday, 25th. Purging not so frequent; pain in the stomach not so violent; tremors; passes urine freely. ℞. Hydr. submur. gr. xxx, pulv. opii gr. iss. m., ft. cha. iij, one every 3 hours—8 P. M. ℞. Ol. ricini ʒss.

Sunday, 26th. Has had several dark bilious evacuations, very fetid—pain in the stomach abated entirely; tongue black; pulse soft. ℞. Submur. hydr., pulv. aloes ana gr. x m.

Monday, 27th. Convalescent.

Saturday, Aug 25th. Adeline Saul, negress, æt. 30. Admitted 8 A. M, collapsed. Died an hour after admission.

Saturday, Aug. 25th. Mary Humphries, white, æt. 19, Frederick street. Admitted 9 A. M. Has had bowel complaint for 3 or 4 days—has been eating green apples, watermelons, &c.—was attacked last night with cramp, vomiting and purging (rice water), severe cramps of the legs, abdomen, &c.; tongue white; surface warm; pulse corded; venesectio ad ʒxviij. ℞. Hydr. submur. ϑj, pulv. opii grs. iij m—mixt. saline—3 o'clock P. M. cramps abated: no urine passed since early this morning.—

℞. Hydr. submur. pulv. nitrat. potass. ana ʒss. m; ft. cha. iij, one every 3 hours.

Sunday, 26th. Complains of slight cramps and headach—tongue same as yesterday; pulse soft: has had 2 evacuations (watery)—continue cal. and nitrat., with mixt. saline.

Monday, 27th. Had several dark evacuations: not so fluid as yesterday; no headach; tongue cleaner; passes urine quite freely; complains of pain in the stomach and bowels. ℞. Ol. ricini ʒss. Mixt. saline as before.

Tuesday, 28th. Oil operated freely,—evacuations much improved; mouth sore; no pain in the stomach or bowels; skin feels natural—mixture saline occasionally.

Wednesday, 29th. Convalescent.

Thursday, 30th. She obtained a piece of bread from some of the patients yesterday, which she ate: complains this morning of pain in the stomach and violent headach; had vomited a little this morning; pulse full; tongue dark in the centre—venesectio ad ʒ xij. ℞. Hydr. submur. pulv. aloes ana ℈j. m, ft. pil. iv., two to be taken every 4 hours—mixt. saline every hour.

Monday 31st. Medicine operated very freely; complains of nothing but very slight weakness of stomach; mixt. saline.

Tuesday—Convalescent.

Saturday 25th. Rachel Travers, negress, æt 35, Granby St. Admitted 9 A. M. Collapsed; died ½ past 11 A. M.

Saturday 25th. William Belcher, (white) æt 18. Admitted ½ past 11 A. M. Has had bowel complaint for the last ten days; ate heartily yesterday and the day before of watermelons, &c. was taken yesterday afternoon with vomiting and purging with cramps; has had no medicine; when admitted the vomiting had ceased; he had continual purging of rice water fluid; tongue livid and cold; pulseless; surface cold; skin of hands and feet blue; eyes sunken. ℞. Hydr. submur. gr. vj, pulv. opii. gr. ij. m: sinapisms to the stomach, wrists and ancles, with hot sand; 2 P. M. purging not so frequent; no improvement otherwise. ℞. Hydr. submur. pulv. nitrat. potas. ana ʒss. m. ft. cha. vj. one every 2 hours—mixt. saline; every hour.

Saturday 26th. Has not complained of the sinapisms: no evacuation from his bowels since last night: blisters were attempted to be raised on the abdomen by means of boiling water, without effect: continue calom. and nitrate, with mixt. saline.

Monday 27th. 3 A. M. expired.

Post mortem appearances. The mucous coat of the stomach and bowels was very much inflamed, throughout its whole extent: the gall bladder nearly full of thick green bile: the liver rather pale: bladder very much contracted; black blood in the abdominal aorta:

on opening the head, the veins of the dura mater were found very much congested, red spots were interspersed through the substance of the cerebrum, and particularly in the cerebellum: a small effusion of water at the base of the brain.

Saturday 25th. Aug. Mary Mathews, (white) æt 22, Frederick St. Admitted ½ past 1 P. M. Has had bowel complaint since Wednesday: was taken at 3 this morning with cramps: vomiting and purging: has been eating watermelons: when admitted she was vomiting and purging (rice water) attended with severe cramps of the extremities and pain of stomach: tongue covered with a dirty white fur: pulse full and frequent: has passed no urine since yesterday: venesectio ad ℥xvj. ℞. Hydr. sul mur. gr. xx. pulv. opii. grs. iij. mixt. saline sinapism to the stomach: 8 P. M. vomiting ceased ℞. Hydr. submur. nitrate potas. ana ℥ss. m., ft. cha iij. one every three hours.

Thursday 26th. Has had but one evacuation during the night, (watery) cramps somewhat abated: tongue same: continue cal. and nitrate; mixt. saline: 4 P. M. pain in the stomach severe. ℞. Ol. ricini ℥ ss.

Monday 27th. Had several evacuations during the night, but little changed in their appearance: no urine: continue cal. and nitre with mixt. saline.

Tuesday 27th. Evacuations very dark and fetid: passed urine once last night and once this morning: tongue brown: headach. ℞. Hydr. submur. pulv. aloes ana gr. x. m., mixt. saline.

Wednesday 28th. Medicine operated freely: evacuations more natural: mouth sore: tongue much cleaner: complains of nothing but weakness of stomach; mixt. saline.

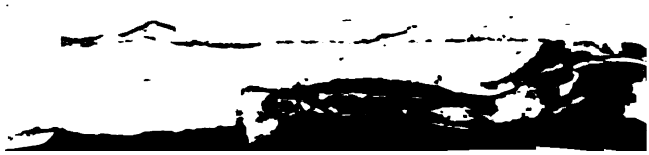
Friday 29th. Convalescent.

Monday Aug. 27th. Eliza Anderson, negress, æt 37. Admitted ½ past 11 A. M. Was found lying in the common near St. Patrick's church: has been eating watermelon and drinking freely: has had bowel complaint for 2 days: when admitted she had severe cramps of the legs, and frequent watery discharges from the bowels: tongue brown: eyes red: pulse full and frequent: Venesectio. ℞. Hydr. submur. gr. vj. opii. gr. ij. m.

Tuesday 28th. Cramps abated entirely: purging not so frequent: (watery) passed a small quantity of urine in the night: tongue same. ℞. Hydr. submur. nitr. potas. ana ℥ss. m., ft. cha. iij.: one every 3 hours, with mixt. saline.

Wednesday 29th. Bowels not evacuated since yesterday morning: complains of pain in the bowels. ℞. Ol. ricini. ℥j. which was repeated every 2 hours, until she took 4 doses without effect: an enema was then administered which brought away very copious dark evacuations: passes urine freely.

Friday 30th. Convalescent.



Monday 27th. Aug. Tobias Groom, negro, æt 60. Admitted 10 A. M. Has had bowel complaint for 3 days: ate watermelon yesterday: when admitted he had frequent light watery evacuations, with pain in the stomach and bowels: passes water but not freely: pulse feeble: tongue white: ℞. Hydr. Submur. gr. xv., pulv. opii. gr. ij. m., 6 o'clock P. M. ℞. Ol. ricini ʒ ss.

Tuesday 28th. Evacuations changed but little; pulse not so feeble; urine small in quantity. ℞. Hydr. submur. nitr. potass. aa ʒss. m. one every 3 hours—mixt. Saline.

Wednesday 29th. Had several dark and offensive stools; passes urine tolerably freely; complains of no pain—mixt. saline occasionally.

Thursday 30th. No evacuation since yesterday; tongue brown. ℞. Hydr. submur. pulv. aloes aa gra. x. m.

Friday 30th. Convalescent.

Monday, Aug. 27th. Thomas Merideth. Admitted Monday 9 P. M. This man was discharged on the 20th of this month—a few days afterwards he returned and was boasting to the patients that he could eat fruit and drink whiskey with impunity; that he had eaten several green apples and a watermelon, and had drank 13 glasses of whiskey from 6 o'clock in the morning till 12 at noon; he was found lying on the pavement in High St. he fell into collapse and died several hours afterwards.

Tuesday 28th. Aug. Eliza Butler, negress, æt 28, Harts Row. Admitted 9 A. M. Had been eating fruit; collapsed; died 1 hour and a half after admission.

Tuesday 28th. Aug. Stanley Anderson, negro, æt 45. Admitted 11 A. M. Has had bowel complaint for several days; ate a small watermelon yesterday; when admitted he had severe cramps of the legs; pain in the stomach; and purging of rice water, no vomiting; has passed but little urine for 2 days; pulse feeble and frequent. Treatment—Venesectio, calomel and opium, colomel and nitre, mixt. nitrous, and sinapisms—recovered.

Tuesday Aug. 28th. Maria Whitico, negress, æt 39. Short St. Admitted ½ past 4 P. M. Had eaten watermelon yesterday; was taken this morning with vomiting and purging, cramps; when admitted she was vomiting and purging; (rice water) cramps of the arms and legs, pain in the stomach; tongue white; surface cold; pulse feeble—Treatment—Cal. and opium, cal. and nitre, mixt. saline, sinapisms—cal. and aloes—recovered.

Wednesday 29th. Aug. Rachael Burk, white, æt 20, Mill St. Admitted 10 A. M. Collapsed; died ½ past 12 P. M.

Thursday 30th. Aug. Charles McDonald, white, æt 43. Admitted ½ past 10 A. M. Collapsed; died one hour after admission; had been under care of Thompsonians since yesterday afternoon.

Friday Aug. 31st. John Lewis, negro, æt 35, Smith's dock. Admitted 3 P. M. Had been eating watermelons yesterday, and drank very freely of whiskey; had slept in a lumber yard all night; was seized this morning early with violent cramps, vomiting and purging; when admitted, he was vomiting and purging, (rice water) severe cramps; tongue livid and cold; surface cold, covered with clammy sweat; eyes sunken, pulseless; died 12 hours after admission.

Friday 31st. Aug. Mary Hudgens, white, æt 20. Admitted ½ past 3 P. M. Had been eating fruit and drinking freely; when admitted, she was vomiting and purging rice water; slight cramps; tongue brown; pulse feeble. Treated with cal. and opium, mixt. saline—cal. and nitre.—recovered.

Friday 31st. Aug. Edward G. Lewis, white, æt 28. Admitted 12 noon. Has but a short time since recovered from an attack of cholera and had started on his return home, and attacked before daylight this morning with vomiting and purging, with severe cramps of the extremities and abdomen; he was taken to a tavern in the neighborhood, and rubbed with cold water, with a view of relieving the cramps; he had eaten a small piece of watermelon yesterday evening. When admitted he had vomiting and purging, (rice water) severe cramps of the legs, arms &c. surface cold, covered with sweat; eyes sunken; tongue livid and cold; pulse scarcely perceptible. Treated with cal. and opium—cal. and nitre, saline mixture and sinapisms—recovered.

Friday 31st. Aug. Philip Benson, black, æt 19. Admitted 4 P. M. Had been eating watermelon; was seized this morning with cramps, vomiting and purging; he had no cramps or vomiting when admitted, but had frequent light watery evacuations; tongue white; surface warm; urine scanty. Treatment—Cal. and aloes—recovered.

Saturday, September 1st. Rosana Rupert, (white) æt 53, Happy Alley. Admitted 5 P. M. Intemperate. Has had diarrhea for 8 days; taken yesterday afternoon with vomiting and purging, when admitted she had vomiting and purging, (rice water) cramps of the extremities; tongue livid and cold; surface cold; extremities blue; has had no medicine. ℞. Hydr. submur. gr. vj. pulv. opii. gra. iij. m. sinapism, to the stomach, hot sand the extremities—mixt. saline every hour.

Sunday 2d. Cramps abated; evacuations same; pulse feeble. ℞. Hydr. submur. pulv. nitr. potassæ aa ʒss. m. ft. cha. iij. one every 3 hours—mixt. saline.

Monday 3d. Evacuations very little changed, no urine; stupor; blister to the neck; continue calomel and nitre. 6 P. M. ℞. Ol. ricini ℥ss.

Tuesday, 4th. Had 3 evacuations, of a chocolate color; stupor increased; passed a small quantity of urine this morning—tongue brown; breathing laborious. ℞. Hydr. submur. pulv. aloes ana gr. x.

Wednesday 5th. Stupor so great, that she cannot be roused; breathing very laborious; great difficulty of swallowing; she remained in this state till three o'clock this morning (Friday) when she expired.

Saturday, 1st Sept'r. Maria Carnes, æt. —, admitted 6 P. M. She had been discharged from here on the 27th August, and went 3 miles into the country to live, she there ate freely of corn and green apples, and drank a quantity of whiskey every day, notwithstanding the frequent admonitions of her friends—she was taken early this morning with vomiting and purging, and cramps—at 3 P. M. she was put into an open cart and brought here; when admitted the cramp was so severe that her screams might be heard over the whole house; she was vomiting and purging (rice water); tongue brown and cold; pulse full—Venesectio. ℞. Hydr. submur. ℈j, pulv. opii gr. iij. m., mixt. saline—immediately after, she was bled; she passed upwards of a pint and a half of urine; she fell into collapse a few hours after, and died at ½ past 1 this morning (Tuesday).

Sunday, Sept'r. 2d. Eliza Cornish, negress, æt. 35, L. alley. Admitted 9 A. M.—collapsed. Died ½ an hour after admission. Had been eating watermelons.

Sunday, 2d Sept'r. Alfred Wilson, negro, æt. 20, Pratt street. Admitted 1 P. M.—ate a small watermelon yesterday: was seized this morning with vomiting and purging—when admitted he had frequent light watery evacuations; pain in the stomach; cramp of the legs; tongue white; pulse full; passes urine.—Treatment—Venesectio, cal. and opium, cal. and nitre, sinapism, mixt saline, cal. and aloes—recovered.

Sunday, 2d Sept'r. Patrick Hart, white, æt. 45, Wilk street. Admitted 3 P. M.—was taken at 3 this morning with vomiting and purging, with severe cramp; has had no medicine; collapsed. Died 12 hours after admission.

Sunday, Sept'r. 2d. Richard Bhiel, æt. 45, white. Admitted 4 P. M.—arrived from Germany 10 days ago—was taken two hours since with vomiting and purging; pain in the abdomen, and slight spasms of the extremities; passes urine freely. Treatment—Venesectio, cal. and opium, cal. and nitre, mixt. saline—recovered.

Sunday, 2d Sept'r. Sarah Smith, white, Monument street.—Admitted ½ past 4 P. M.—has been sick for 2 weeks previous to admission—has been under treatment—when admitted she was

perfectly insensible—eyes half closed, pupils very much dilated; surface warm; pulse feeble. ℞. Hydr. submur. pulv. nitrat. potass. ana ʒss. m., ft. cha. iij, one every 3 hours—blister to the neck.

Tuesday, 3d. Same as yesterday—cal. and nitre, stimulating enemata, corrosive sublimate ointment, to be well rubbed on the lower extremities.

Wednesday, 4th. Unable to swallow any thing, and continued to grow worse until 6 A. M. (Wednesday) when she expired.

Sunday, 2d Sept'r. Henry Fellows, white, æt. 32. Admitted 6 P. M.—very much emaciated—has been sleeping in the woods for 3 weeks. Died 8 hours after admission.

Monday, Sept'r. 3d. Eli Richards, black, æt. 30. Admitted 9 A. M., (Sterret's town). Was taken last evening with vomiting and purging, with cramps—has been eating fruit; when admitted was vomiting and purging (rice water); cramps of the legs and arms; pain in the stomach; great thirst; tongue brown; surface cold; pulse full—has passed no urine since yesterday afternoon. Treatment—Venesectio, cal. and opium, cal. & nitre: mixt. saline, cal. and aloes, sinapisms—recovered.

Monday, Sept'r. 3d. Sophia ———, negress, æt. 30, Sterret town. Admitted 10 A. M. Was taken early this morning with vomiting and purging—when admitted she complained of severe cramp of her legs; vomiting and purging (rice water); pain in stomach; great thirst; tongue white, surface warm; pulse full; passes urine. Treatment—Venesectio, cal. and opium, mixt. saline, cal. and nitre, sinapisms—recovered.

Monday, 3d Sept'r. James Connell, white, æt. 45, Ensor-st. Admitted 3 P. M. Has been unwell for some weeks past—was taken with vomiting and purging some days ago, of which he was relieved—has brought the disease on him again by imprudence and exposure—has been vomiting and purging since last evening, accompanied with severe cramps—when admitted he was vomiting and purging (rice water); severe cramps of the arms and legs; skin covered with clammy sweat; tongue white and cold; pulse very feeble; great thirst; no urine passed since yesterday. Treated with calomel and opium, cal. and nitre, mixt. saline, sinapisms, frictions with lard, &c. Died 8th September.

Monday, Sept'r. 3d. John O'Flaherty, white, æt. 38, Bishop's alley. Admitted ¼ past 7 P. M. Has been sick since Saturday last—when admitted he had vomiting and purging (rice water); severe cramps; great thirst; pain in stomach; tongue white, surface cool; pulse feeble—has passed no urine to day. Treatment: Calomel and opium, cal. and nitre, mixt. saline, frictions with lard, sinapisms, &c.—recovered.

Tuesday, 4th Sept'r. Margaret Connel, white, æt. 38, Ensor street. Admitted 9 A. M. Has had diarrhea for 3 weeks—was taken last evening with vomiting and purging, &c.—when admitted she was vomiting and purging (rice water); severe cramps; tongue brown, great thirst, surface warm; pulse full; no urine since yesterday. Treated with calomel and opium, cal. & nitre, mixt. saline, blisters, frictions with melted lard, &c. Died 12th.

Tuesday, 4th Sept'r. Peggy Beson, black, æt. 70, Douglass street. Admitted ½ past 9 A. M. Collapsed, and died 15 minutes after admission.

Tuesday, Sept'r. 4th. Mary Ann Smith, white, æt. 15, Pratt street. Admitted 12 noon. Was attacked with cholera 2 weeks ago—when admitted she was very weak; tongue brown; pulse feeble and frequent; no evacuations from the bowels for two days. Treatment—Cal. and nitre, ol. ricini, mixt. saline—recovered.

Tuesday, Sept'r. 4th. Edward Jubb, white, æt. 13, Happy alley. Admitted 5 P. M. Was taken early this morning—has been eating fruit—when admitted he was vomiting and purging (rice water); severe cramps of the legs and arms; pain in stomach, surface cold and covered with cold sweat; tongue livid and cold; pulse scarcely perceptible. Treatment—Calomel and opium, cal. and nitre, frictions with lard, mixt. saline, sinapisms—recovered.

Tuesday, 4th Sept'r. Jenny Stakes, black, æt. 65, Happy alley. Admitted ½ past 5 P. M. Has had vomiting, with severe cramps for 24 hours; collapsed. Died ½ past 3 A. M. (Thursday.)

Tuesday, Sept'r. 4th. Richard Stallings, white, æt. 66, Strawberry alley. Admitted ½ past 6 P. M. Intemperate—has been sick some time—when admitted had frequent watery discharges from his bowels, with pain in stomach; no vomiting; tongue white; pulse full and tense; passes urine. Treatment—Venesectio, calomel and opium, cal. and nitre, mixt. saline, &c.—recovered.

Wednesday, Sept'r. 5th. Mary Riley, white, æt. 17, Mill-st. Admitted 8 A. M. Has been sick for 2 weeks—when admitted she had frequent light watery discharges from her bowels, with pain in stomach and severe cramps of her legs; tongue white, surface warm; pulse feeble: passes urine freely. Treatment—Calomel and opium, cal. and nitre, mixt. saline, sinapisms—recovered.

Wednesday, Sept'r. 5th. Margaret Broome, white, æt. 23, Brannan's alley. Has had diarrhea for 8 days—was attacked at 9 last evening with vomiting and purging, with severe cramps of the arms, legs, &c.—when admitted she had no vomiting, purging or cramps; tongue livid and cold, surface cold; skin of arms and legs blue; eyes sunken; pulseless. A Thompsonian had

been attending her. ℞. Hydr. submur. ℈j, pulv. opii gr. iij m: she remained in the same state as when admitted, until 4 A. M., (Thursday), when reaction commenced; she complains of weight at her stomach; took a saline emetic at 8 A. M.; pulse full and tense—Venesectio ad ʒ xxx. ℞. Hydr. submur. pulv. nitrat. potas. ana ʒss. m., ft. cha. iij, one every 3 hours—mixt. saline, a table spoonful every hour—at 5 P. M. complains of pain in the head; moaning; pulse full; no urine—Venesectio ad ʒ xvj: continue cal. and nitre.

Friday, 7th. Symptoms same as yesterday; no urine; pulse full; bowels freely purged; evacuations of a chocolate color; stupor; constant moaning; pupils dilated; a small quantity of urine passed; tongue dark brown; blister to the scalp. ℞. Hydr. submur. pulv. aloes ana grs. x m.

Sunday, 8th. Stupor very great; pupils much dilated; respiration exceedingly difficult; pulse weak; constant moaning—she remained in this state until 6 this morning (Tuesday), when she expired.

Wednesday, Septm'r. 5th. Robert McClure, white, æt. 30, Happy alley. Admitted ½ past 10 A. M.; collapsed and died 3 hours after admission—Intemperate.

Wednesday, Sept'r. 5. Caroline Cramer, white, æt. 12, Bel-Air road. Admitted 5 P. M. Taken yesterday evening with vomiting and purging—when admitted was vomiting and purging (rice water); cramps of the legs; tongue white; pulse extremely feeble; surface cold. Treatment—Calomel and opium, cal. and nitre, mixt. saline, sinapisms—recovered.

Wednesday, Sept'r. 5. Catharine Cramer, white, æt. 10, Bel-Air road. Admitted 3 P. M. Was taken yesterday morning with vomiting and purging—when admitted vomiting and purging (rice water); severe cramps of the legs, arms, &c.—pain in the head; tongue brown; pulse full; surface warm; no urine.—Treatment—Venesectio, cal. and opium, cal. and nitre, mixt. saline, sinapisms—recovered.

Thursday, Sept. 6th. Frederick McCloud, white, æt. 25, Alice-anna street. Admitted 10 A. M. Has had diarrhea since Saturday last—was taken last evening with vomiting and purging, cramp: when admitted vomiting and purging (rice water); cramps of the legs, arms, &c.—tongue white and cold; surface cold; pulse extremely feeble; passes urine; great thirst. Treatment—Cal. and opium, cal. and nitre, mixt. saline, frictions with lard, sinapism—recovered.

Thursday, Sept'r. 6th. Wm. H. Koust, white, æt. 38, lately arrived from Germany. Admitted 12 noon. Has had diarrhea for several days, accompanied with pain; tongue white; pulse full and frequent—does not pass urine freely. Treatment—Vene-

sectio, calomel and nitre, cal. and aloes. ℞. Ol. ricini, &c.—recovered.

Thursday, Sept'r. 6th. Sarah Gambrill, black, æt. 65—collapsed, and died 14 hours after admission.

Thursday, Sept'r. 6th. Elizabeth Holten, white, æt. 35, South street. Admitted ½ past 3 P. M. Was taken at 4 o'clock this morning with severe vomiting and purging—has been under the care of doctor Giraud—collapsed—Died 3 hours after admission.

Thursday, Sept'r. 6th. Hetty Cromwell, black, æt. 53. Admitted 4 P. M. Taken this morning with vomiting and purging (rice water)—when admitted was vomiting and purging, with severe cramps of the extremities, abdomen, &c.; great thirst; tongue furred and cold; surface cold, and covered with a clammy sweat; pulse very feeble. Treatment—Calomel and opium, cal. and nitre, mixt. saline, frictions with melted lard, three applications of which dried up the perspiration and gave the skin a warm and pleasant feeling—recovered.

Thursday, Sept'r. 6th. Gawen Fren, white, æt. 23, Canton. Admitted ½ past 4 P. M. Intemperate—was taken on Tuesday night last with vomiting and purging, since which time he has been drinking freely—collapsed.

Friday, Sept'r. 7th. Jackson Duff, white, æt. 9, Sterrett's town. Admitted ½ before 11 A. M. Has been in the habit of bathing 3 or 4 times daily for some time past, and eating freely of fruit—was taken at sunset yesterday with vomiting and purging, accompanied with severe cramps of the extremities—was seen by doctor Diffenderffer—when admitted was vomiting and purging (rice water); tongue white and cold; great thirst; surface cold; covered with sweat; pulse feeble. Treatment—Calomel and opium, cal. and nitre, mixt. saline, frictions with lard, &c. Died 12th instant.

Friday, Sept'r. 7th. Louisa Cramer, white, æt. 4, Harrison street. Admitted 12 noon—was taken last evening with vomiting and purging—has been eating fruit—when admitted she had no vomiting, but frequent purging of a light watery fluid—has had calomel and camphor every 2 hours, till 7 this morning, when she took ol. ricini. Treatment—Calomel and pulv. Doveri, mixt. saline, ol. ricini, &c.—recovered.

Friday, Sept'r. 7th. Rachel Fennell, white, æt. 30, Douglass street. Admitted ½ past 12 P. M. Was taken last evening with vomiting and purging—an attempt was made to bleed her by doctor Whittaker, but none could be obtained—has had medicine—collapsed, and died 3 hours after admission.

Friday, Sept'r. 7th. Edmund Carter, white, æt. 30. Admitted 3 P. M. Intemperate—has had diarrhea for several days—taken with vomiting and purging—when admitted he was vomit-

ing and purging (rice water); severe cramps of the extremities, abdomen, &c.; great thirst; tongue white; surface warm; pulse full and frequent. Treatment—Venesectio, calomel and opium, cal. and nitre, blisters, &c.—recovered.

Friday, Sept'r. 7th. Henry Moore, black, æt. 50. Admitted 6 P. M.—collapsed. Died 8 hours after admission.

Saturday, Sept'r. 8th. Thomas Hynes, white, æt. 43, Frederick street. Admitted 10 A. M. Intemperate—has had diarrhea, with occasional vomiting since Wednesday last—when admitted he was vomiting and purging (rice water); cramps of the extremities; great thirst; surface cool; tongue brown; pulse very feeble. Treatment—Calomel and opium, cal. and nitre, mixture saline, sinapisms, &c. Died 11th instant.

Saturday, Sept'r. 8th. Michael Kean, white. æt. 38, Thames street. Admitted 10 A. M. Intemperate—has had bowel complaint since Thursday last—was taken with vomiting and purging this morning—when admitted he had frequent light fluid evacuations; great thirst; violent pain in the stomach; tongue white; surface warm; pulse full and tense. Treatment—Venesectio, calomel and opium, cal. and nitre, mixt. saline, ol. ricini, sinapisms, &c.—recovered.

Saturday, Sept'r. 8th. John Gormley, white, æt. 21, Liberty street. Admitted ½ past 12. Has been sick since Wednesday last—was taken early this morning with vomiting and purging (rice water); has had no medicine; when admitted was vomiting and purging (rice water); severe cramps of the legs, arms, &c.; tongue white; surface covered with cold sweat; great thirst.—Treatment—Venesectio, calomel and opium, cal. and nitre, mixt. saline, blisters, frictions with melted lard every ½ hour, 4 or 5 applications of which completely dried up the perspiration—recovered.

Saturday, Sept'r. 8th. John Brown, negro, æt. 75, L. alley. Admitted ½ past 1 P. M. Has had diarrhea since last Thursday; has been eating watermelons, and drinking freely—when admitted he had very frequent evacuations of a light watery fluid—cramps of the extremities; great thirst; skin warm; tongue covered with a dirty whitish fur; pulse feeble; has passed no urine since yesterday morning. Treatment—Calomel and opium, cal. and nitre, mixt. saline, cal. and aloes, ol. ricini, blisters—recovered.

Saturday, Sept'r. 8th. Henry Margatine, æt. 35, white, Marsh Market space. Admitted 2 P. M. Collapsed.

Saturday, Sept'r. 8th. Andrew Campbell, white, æt. 45, Harrison street. Admitted ½ past 3 P. M. Collapsed—died 4 hours after admission.

Sunday, Sept. 9th. Robert Duff, white, æt. 40, Sterett's town. Admitted ½ past 9 A. M. Has had diarrhea for nearly a month; was taken at 5 P. M. yesterday with vomiting and purging, with severe cramps—when admitted he had vomiting and purging (rice water); extreme thirst; tongue brown; surface cool; pulse feeble; has passed no urine since yesterday morning. Treatment: Cal. and opium, cal. and nitre, cal. and aloes, mixt. saline, ol. ricini, frictions with melted lard, blisters, &c.—recovered.

Sunday, Sept. 9th. Matilda Duff, white, æt. 45, Sterett's town. Admitted 10 A. M. Has had diarrhea for two weeks; taken last evening with vomiting and purging, with cramps; has been eating fruit—no medicine—when admitted she was vomiting and purging (rice water) accompanied with severe cramps of arms, legs, &c.; tongue covered with a dirty white fur; surface cold, covered with clammy sweat; pulse feeble; respiration difficult; no urine passed since yesterday morning. Treatment—Calomel and opium, V. S. cal. and nitre, mixt. saline, frictions with lard, sinapisms, blisters, &c Died.

Sunday, Sept'r. 9th. John H. Ford, white, æt. 25, admitted 6 P. M.; arrived a few days ago from New York—has had intermittent for 3 weeks, and diarrhea since Friday last—has been eating fruit—when admitted he had frequent light watery evacuations, accompanied with severe pain in the stomach; tongue white; surface warm; pulse feeble and frequent; passes urine freely. Treatment—Calomel and opium, cal. and quinine, mixt. saline, &c.—recovered.

Sunday, Sept. 9th. Mrs. Reever, white, æt. 40, admitted ½ past 6 P. M. Has been sick several days; was seen at 4 P. M. this afternoon by doctor Hintze, who gave her the following:—℞. Calomel ℈j, pulv. opii gr. iij, with ʒiij vol. tinct. guiac. Collapsed; died 8 hours after admission.

Sunday, Sept'r. 9th. John Reever, white, æt. 7, admitted ½ past 6 P. M. Has had diarrhea for two days, with severe pain in the stomach; tongue white; surface warm; pulse feeble. Treatment—Calomel and opium, cal. and nitre, mixt. saline, &c.—recovered.

Sunday, Sept'r. 9th. Jane Richards, black, æt. 36. Admitted ½ past 9 P. M. Collapsed; died 7 hours after admission.

Monday, Sept. 10th. Dorcas Armstrong, black, æt. 42, Sterret's town. Admitted 12 noon. Collapsed; died 15 minutes after admission.

Monday, Sept. 10th. Adeline Miller, black, æt. 23, Caroline street. Admitted 1 P. M. Was taken with vomiting and purging, with cramps at 8 this morning; has had no medicine; when admitted she was vomiting and purging (rice water); severe cramps; tongue brown; surface warm; pulse full and frequent;

no urine since yesterday. Treatment—Venesectio, calomel and opium, cal. and nitre, ol. ricini, mixt. saline, sinapisms, &c.—recovered.

Monday, Sept'r. 10th. Charles Jones, negro, æt. 32, L. alley. Admitted 3 P. M. Has been sick since last Wednesday; has been eating fruit and drinking freely. Collapsed; and died 14 hours after admission.

Monday, Sept'r. 10th. Priscilla Richards, black, æt. 47. Admitted 10 P. M. Collapsed; died 4 hours after admission.

Wednesday, Sept. 12th. Philip Foster, white, æt. 60, Mill-st. Admitted 2 P. M. Intemperate—has had bowel complaint for several weeks; taken on Saturday last with vomiting and purging; has had no medicine; collapsed; died 14 hours after admission.

Wednesday, Sept. 12th. Edward Barrett, white, æt. 47, Pratt street. Admitted 4 P. M. Was taken last evening with vomiting and purging—was seen by doctor Giraud; collapsed; died 12 hours after admission.

Wednesday, Sept. 12th. Harriet Hupp, negress, æt. 35, Pitt street. Admitted 4 P. M. Was taken on Saturday with vomiting and purging; has been eating fruit; has had some medicine; when admitted she was vomiting and purging (rice water); cramps of the legs; severe pain in the stomach; tongue covered with a dirty white fur; great thirst; pulse feeble; surface cold, and covered with a clammy sweat; has passed no urine since yesterday. Treatment—Calomel and opium, calomel and nitre, frictions with melted lard, cal. and aloes, mist. aloes, sinapisms, &c. &c.—recovered.

Wednesday, Sept'r. 12th. Rachel Brown, negress, æt. 30, Pratt street. Admitted ½ past 6 P. M. Was taken on Saturday with vomiting and purging; was bled and took some medicine; when admitted she was vomiting and purging (rice water); tongue brown and cold; great thirst; surface cold, and covered with sweat; pulse feeble; passed urine this morning. Treatment—Calomel and opium, cal. and aloes, frictions with lard, cal. and nitre, blisters, mist. saline, &c.—recovered.

Wednesday, Sept'r. 12th. Frederick Duvall, white, æt. 29, New Dock. Admitted 7 P. M. Has had diarrhea for 3 or 4 days; was taken this morning with vomiting and purging; has been drinking freely; was bled and took a saline emetic; when admitted he had no vomiting, but frequent evacuations from his bowels of a light watery fluid; tongue white, pulse feeble; great thirst; pain in the stomach; surface warm; passed urine this morning. Treatment—Venesectio, calomel and opium, cal. and nitre, mist. saline, sinapisms, &c.—recovered.

Thursday, Sept'r. 13th. Thomas Lomax, white, æt. 23. Admitted 6 P. M. Has been sick several days with vomiting and purging; has taken some of Houck's medicine; when admitted he had no vomiting; bowels not moved since Tuesday; tongue white; pulse full; pain in the stomach; surface warm; great thirst; passed no urine since yesterday. Treatment—Venesectio, ol. ricini, cal. and nitre, mixt. saline, sinapisms, &c.—recovered.

Thursday, Sept'r. 13th. Cesar May, negro, æt. 75, L. alley. Admitted 7 P. M. Collapsed; died 8 hours after admission.

Thursday, Sept. 13th. Elizabeth Sewall, black, æt. 30. Admitted 9 P. M. Has had diarrhea for 2 days; has been eating fruit; when admitted she was vomiting and purging (rice water); great thirst; pain in the stomach; tongue white; surface warm; pulse full; passed urine this morning. Treatment—V. S. cal. & opium, cal. and nitre, mixt. saline, cal. and aloes, blisters, &c.; recoverd.

Saturday, Sept'r. 15th. Francis W. Franklin, white, æt. 25. Admitted 11 A. M., a few days ago from Philadelphia; has been eating green apples, and drinking freely; was taken this morning with vomiting and purging; when admitted he was vomiting and purging (rice water); cramps of the arms and legs; severe pain in the stomach; tongue white; pulse full; surface warm; great thirst; passed urine this morning. Treatment—V. S., calomel and opium, cal. and aloes, mixt. saline, ol. ricini, sinapisms, &c.—recovered.

Sunday, 16th Sept'r. Newton Saville, white, æt. 45, Screw Dock. Admitted ½ past 2 P. M. Has had diarrhea for a week; taken with vomiting and purging yesterday evening; has had no medicine; when admitted he was vomiting and purging (rice water); severe cramps of the legs, arms, &c.; tongue brown; surface covered with sweat; pulse rather feeble; passed no urine since yesterday morning. Treatment—V. S , calomel & opium, calomel and nitre, mixt. saline, frictions with lard, blisters, &c., died.

Sunday, Sept'r. 16th. Alexander Scraggs, white, æt. 36, Exeter street. Admitted ½ past 3 P. M. Has had diarrhea for 5 days; was taken early this morning with vomiting and purging; when admitted he was vomiting and purging (rice water), with severe cramps of the extremities; great thirst; pulse feeble; tongue white; surface cold, covered with sweat; passed no urine since yesterday. Treatment—Calomel and opium, frictions with melted lard, which dried the perspiration after two applications, cal. and nitre, mixt. saline, cal. and aloes, sinapisms, blisters, &c; recovered.

Sunday, Sept. 16th. Mary Wheeler, black, æt. 36, Still House row, admitted 5 P. M. Has had diarrhea for two or three days; has been eating fruit; was taken last evening with vomiting and purging, has had medicine; when admitted, vomiting and purging (rice water;) severe cramps—pulse feeble; tongue brown; surface covered with sweat; no urine since yesterday. Treatment—V. S. calomel and opium, frictions with melted lard, calomel and nitre, mixt. saline, calomel and aloes, sinapisms, blisters, &c., recovered.

Monday, September 17th. Samuel Pack, negro, æt. 75, admitted ½ past 1 P. M. Has been sick several days; eating fruit; collapsed—died 2 hours after admission.

Tuesday, Sept. 18th. Sarah Brown, white, æt. 50, Sterett's town, admitted ½ past 11, A. M. Intemperate; was taken yesterday afternoon, with vomiting and purging, with severe cramps; slept in a lumber yard all night; collapsed—died in 14 hours.

Tuesday, Sept. 18th. Patrick McCambridge, white, æt. 43, Canton, admitted 3 P. M. Intemperate; has been vomiting and purging since yesterday evening; collapsed—died 13 hours after admission.

Tuesday, Sept. 18th. Jacob Johnson, black, æt. 49, Exeter street. Admittance ½ past 3 P. M. Has been sick three or four days; with occasional vomiting and purging; when admitted he had no vomiting; frequent watery evacuations; pain in the stomach; tongue white; pulse full; surface warm; passes urine freely. Treatment—V. S. cal. and nitre—mixt. saline, calomel and aloes, ol. ricini, infus. senna, &c.—recovered.

Tuesday, 18th. Sept. Rachel Anderson, black, æt. 47, Front street, admitted 6 P. M. Has been sick 2 weeks; was taken yesterday with vomiting and purging; when admitted, she was vomiting and purging, (rice water) tongue white; pulse full and tense; surface warm; great thirst; has passed no urine since yesterday evening. Treatment: V. S. cal. and opium, cal. and nitre, mixt. saline, ol. ricini, frictions with lard, &c.—recovered.

Thursday, Sept. 20th. Mrs. Finlay, white, æt. 39, admitted 10 A. M. Collapsed—died one hour after admission.

Thursday, Sept. 20th. Mary Webber, white, æt. 40, Apple alley, admitted 2 P. M. Intemperate; has had diarrhea for 10 days; was taken yesterday with vomiting and purging; collapsed—died 12 hours after admission.

Thursday, Sept. 20th. James Flemming, white, æt. 39, admitted ½ past 2 P. M. Intemperate; arrived from Philadelphia yesterday; has had diarrhea for several days; taken with vomiting and purging this morning; when admitted, was vomiting and purging; (rice water); severe cramps; great thirst, tongue brown; surface warm; pulse full; passes urine. Treatment—V. S. calo-

mel and opium, cal. and nitre, mixt. saline—frictions with the melted lard—cal. and aloes, infus. senna, sinapisms, &c.—recovered.

Saturday, Sept. 22d. Edward Weaver, white, æt. 13, York road, admitted 6 P. M. Has been eating nothing but fruit, and lying out in the open air for 3 or 4 days past; collapsed—died 8 hours after admission.

Tuesday, Sept. 23d. John McCready, white, æt. 50, Frederick street, admitted 9 A. M. A few days from Philadelphia; has had diarrhea for several days; was on a frolic last night; when admitted, he had frequent watery evacuations; tongue white; pain in the stomach; surface warm; pulse full; passes urine. Treatment: venesectio, calomel and opium, cal. and nitre, mixt. saline, ol. ricini, &c.—recovered.

Sunday, 23d Sept. Henry Drofter, white, æt. 32, Bond street, admitted 10 A. M. Intemperate; was taken last evening with vomiting and purging; when admitted he had no vomiting—but frequent light brown evacuations, mixed with a very bright yellow fluid; severe cramps; great thirst; tongue white; pulse full; surface covered with sweat; passes urine freely. Treatment—venesectio, calomel and opium, frictions with melted lard, cal. and nitre, mixt. saline, ol. ricini, sinapisms, &c. &c.—recovered.

Monday, 24th Sept. Francis M'Coy. white, æt. 19, Orleans street, admitted ½ past 1 P. M. Has had diarrhea for two days; was down the river yesterday in a sail boat, and lay on the damp ground for some time; was taken at 2 o'clock this morning with vomiting and purging; was seen by doctor Yates, who gave him some medicine; when admitted he had no vomiting, but frequent watery evacuations; pain in the stomach; pulse feeble; tongue white; surface cold and covered with sweat; passed no urine since yesterday. Treatment—calomel and opium, cal. and nitre, mixt. saline, frictions with melted lard, ol. ricini, sinapisms—recovered.

Monday, Sept. 24th. Gregory Curran, white, æt. 36. Sickened this morning; has been bled; when admitted had frequent purging; pain in the stomach; tongue white; pulse soft; surface warm; passes no urine freely Treatment—Calomel and opium, mixt. saline, cal. and aloes, sinapisms, &c.—recovered.

Monday, 24th Sept. Hester Dorsey, black, æt. 38, Pitt street, admitted 10 P. M. Has had diarrhea several days; was taken early yesterday morning with vomiting and purging—with severe cramps; since which time she has been taking medicine from one Boulden, a Thompsonian—collapsed.

Tuesday, Sept. 25th. Ann Thomas, negress, æt. 45, Wilk street, admitted 10 A. M. Was taken at 9 o'clock last evening with vomiting and purging—has had no medicine; when admit-

ted, she had no vomiting; frequent purging with severe cramps; tongue brown; pulse full; surface warm; passes urine. Treatment—Venesectio, cal. and opium, cal. and nitre, mixt. saline, frictions with lard, &c.—recovered.

Tuesday, Sept. 25th. Priscilla Jones, negress, æt. 47, admitted 2 P. M. Has been sick for some time; has been eating fruit; taken 2 or 3 days since with vomiting and purging; when admitted she had no vomiting, but very frequent watery evacuations; severe cramps; tongue brown; pulse very feeble; surface cold and covered with sweat; pain in the stomach; has passed no urine for 2 days. Treatment—cal. and opium, cal. and nitre, frictions with melted lard, mixt. saline, sinapisms, &c.—died.

Tuesday, Sept. 25th. James Dyer, white, æt. 36, admitted 5 P. M. Has been sick several weeks; taken day before yesterday with vomiting and purging; has been eating apples; when admitted he was vomiting and purging; (rice water,) cramps of the legs, arms, &c.; tongue brown; surface cold; pulse very feeble; passes no urine. Treatment—calomel and opium, mixt. saline, cal. and nitre; frictions with melted lard, blisters, &c.—died.

Friday, Sept. 23d. Catharine Graves, white, æt. 46, Green st., admitted 3 P. M. Has had diarrhea for 3 weeks; eating fruit; was taken yesterday with vomiting and purging, accompanied with severe cramps; has had medicine; when admitted, she had constant purging of a light watery fluid; pain in the stomach; severe cramps; tongue covered with a dark brown fur; pulse very feeble: surface cold; passes urine. Treatment—calomel and opium, mixt. saline, calomel and nitre, frictions with lard, sinapisms, &c.—died.

Saturday, Sept. 29th. Matilda Poole, white, æt. 36, Wilk street, admitted 2 P. M. Intemperate; has been sick several days; collapsed—died 14 hours after admission.

Saturday, Sept. 29th. Matilda Barnet, negress, æt. 50, admitted ½ past 2 P. M. Has been sick for a week; was taken yesterday with vomiting and purging with severe cramps, and pain in the stomach from eating an apple; when admitted she was vomiting and purging (rice water,) cramps of the arms, legs, &c.; tongue brown; surface covered with sweat; pulse very feeble; passed no urine since early yesterday morning. Treatment: cal. and opium, frictions with melted lard, cal. and nitre, mixt. saline, ol. ricini, injections, sinapisms, blisters, &c.—died.

Saturday, Sept. 29th. William Reid, white, æt. 37, admitted 4 P. M. Was taken yesterday with vomiting and purging; when admitted was vomiting and purging accompanied with severe cramps of the arms, legs, &c.; tongue white; pulse feeble; surface warm; passed no urine since yesterday evening. Treatment:

calomel and opium, mixt. saline, calomel and nitre, frictions with melted lard, sinapisms, blisters, &c.—recovered.

Sunday Sept. 30th. Nathan Heird, white, æt. 37, Light street Dock, admitted 2 P. M. Has had diarrhea for several days, has been eating fruit; when admitted, was vomiting and purging (rice water;) tongue white; pulse very feeble; severe cramps: great thirst; surface cold, covered with clammy sweat; passed no urine since yesterday—treatment, v. s. calomel and opium, frictions with melted lard; calomel and nitre, mixt. saline, ol. ricini, calomel and aloes, sinapisms, blisters, &c.—recovered.

Monday October 1st. Charles Dorsey, negro, æt. 39, admitted 2 P. M. Has been ill several days; has had no medicine; collapsed—died ½ hour after admission.

Saturday October 6th. Charles Sterritwill, white, æt. 39, admitted 11 A. M. Intemperate; has been eating fruit, was taken yesterday with diarrhea; when admitted had frequent light watery evacuations; severe pain in the stomach; tongue white; pulse full; surface warm; passes urine freely. Treatment—V. S. cal. and opium, mixt. saline, cal. and nitre, ol. ricini, sinapisms, &c. recovered.

Wednesday, Oct. 10th. William Graham, white, æt. 27, admitted 9 P. M. Has been frolicking for several days; was taken yesterday with diarrhea, with severe pain in the stomach; when admitted, was purging light fluid matter; severe pain in the stomach; headach; tongue furred; pulse full; surface warm; passes urine. Treatment—V. S. cal. and opium, mixt. saline, sinapisms, &c.—recovered.

Friday, Oct. 12th. Henry Taman, white, æt. 32, admitted 10 A. M. Was taken with diarrhea yesterday morning; has been eating apples; when admitted had frequent watery evacuations; pain in the stomach; tongue white; pulse full, surface warm; passes urine. Treatment—V. S. calomel and opium, mixt. saline, ol. ricini, &c.—recovered.

Saturday, Oct. 13th. Polly ——, negress, æt. 37, admitted 2 P. M. Has been complaining for 2 or 3 weeks; was taken yesterday with vomiting and purging; cramps, &c.; collapsed—died one hour after admission.

Saturday, Oct. 13th. Lawrence Cholhaus, white, æt. 47, admitted 8 P. M. Has been sick for 2 weeks; collapsed—died 6 hours after admission.

Sunday, Oct. 14th. Elizabeth Carevell, negress, æt. 35, admitted 3 P. M. Has had diarrhea since Thursday last, from eating cabbage; was seized with severe cramps this morning; when admitted she had frequent watery evacuations; with severe pain in the stomach; tongue white; pulse full; surface warm; passes

urine—treatment v. s. calomel and opium, mixt. saline, calomel and nitre, ol. ricini, sinapisms, &c.—recovered.

Wednesday, Oct. 17th. Ann Goff, white, æt. 37, admitted ½ past 11 A. M. Has been sick for a considerable time: has been attended by doctor Kellogg; very intemperate: when admitted, she had no vomiting, but very frequent, light watery evacuations: cramps of the legs: severe pain in the stomach: tongue brown: pulse very feeble: surface covered with sweat: has passed no urine for three days. Treatment—Calomel and opium, frictions with melted lard, calomel and nitre, mixt. saline, injections, sinapisms, blisters, &c.—recovered.

Historical Sketch.

We have ventured to encounter the risk of incurring the censure of those who may differ in opinion with us, in offering the greater part of our hospital practice in detail. We are aware that among the many attempts which have been made, to throw light on the truly important subject before us, there has been a great redundancy of common-place matter; but, after all, we are not sure that this was not the most safe and speedy method, of enabling the medical public to acquire a correct knowledge of the disease, and to ascertain the best mode of treatment. It will be admitted, we presume, by most medical inquirers, that epidemic cholera, like other epidemics, varies in its nature as it shall happen to be associated with peculiarities of location, of season, of modes of living, &c. &c. If such be the fact, it follows that until we are well acquainted with this disease in all its varied features, we cannot well become thoroughly acquainted with its character, which is, indeed, of a protean nature.

In the present instance, we think, the detail into which we have gone seems to be the more proper from the fact, that, the malignant form of cholera, of the present year, bore a near similitude to yellow fever, which has sometimes prevailed in our city; and because of the fact, that the practice which proved most satisfactory to the present writer and many other physicians, is in good degree peculiar, though it is far from our design to offer any thing in a form of a specific, much less wickedly to prostitute ourselves by descending to offer nostrums.

The tabular views which are incorporated in this article of the hospital cases, with their terminations, will show, that, we have not followed out the details of cases till the hospitals were closed. This may account for the abrupt termination of the re-

ports of doctors Carrere and Mackenzie. It will readily be perceived that after a reasonable trial of all the more active remedies, reported to have been found beneficial in the treatment of cholera, our practice became settled and remarkably simple. A very brief abstract of our views and practice was drawn up by doctor Carrere, at the instance of the present writer, for the city authorities of Savannah; to which the reader can have ready access, by turning to the index of the present number.

We shall here suspend our observations of a directly medical character for the present, to make way for a very brief historical account of the disease, and the measures adopted, by our city authorities, both in anticipation and in combatting this deadly foe. By this sketch we hope to prove that, our authorities, alive to every sense of humanity, spared no pains to prepare measures of defence; and that it was their good fortune to be instrumental in devising the "ways and means" calculated in the best manner to disarm the cholera of its power. By measures well devised, and faithfully executed, our city was relieved of an appalling foe, with an expenditure of money very moderate in amount, and with a mortality which, under all the circumstances, leaves much room for thankfulness to Heaven, that we were spared after an amount of mortality far below what we had reason to apprehend, judging from what we had previously known of this destroyer of the human family.

In the month of February last, the consulting physician for the city, addressed a communication to the Mayor and Board of Health, on the subject of epidemic cholera, in which he offered such facts and reflections, in support of the epidemic character of the disease, as were entirely satisfactory to his own mind, and probably tended to strengthen the opinion of those to whom it was addressed. We hesitate not to state our opinion, that the atmosphere, at that early period, had assumed in a slight degree the deterioration which afterwards became so destructive to human life. We shall briefly state the symptoms of a case, which occurred in our practice—it is true this case might be ascribed to some accidental cause, and viewed as a case of common cholera; but, we thought at the time, and expressed our apprehensions to the Board of Health, that we considered the case as bearing a strong resemblance to cholera then existing in Europe, and subsequent observation has strengthened the belief, that such was the nature of the case.

"February 19th, 1832.—We were sent for in haste to visit Mr. W. W. of this city. We were informed that, on the night of the 17th instant, he retired to bed in his usual health, but awoke some time in the night, suffering from severe cramps in the stomach, hands, and legs—not wishing to disturb the family, he bore his

sufferings, and after some hours continuance, they gradually subsided; and, in the morning, he was so far restored as to rise and walk out. He retired to bed in the evening feeling very well, but at an early hour the next morning, he awoke, with sickness at stomach, which soon led to severe vomiting, and to this was soon added diarrhea: both continued to harrass him for several hours—by the mouth he ejected large quantities of yellow greenish bile, and per anum considerable quantities of watery fluid, mixed with a good deal of whitish mucus. The cramps continued all this time severe in the stomach hands, and legs—the fingers were painfully drawn in. We were absent and did not see the patient for some hours; on our arrival we found him very much prostrated, skin very cool, face very pale, pulse feeble and small, tongue slightly coated whitish. Severe pain in the region of the stomach, with spasms as often as he attempted to stir. The stomach still very sick, but the purging and vomiting considerably abated.

"We prescribed as follows: ℞. submur hydr. ℈j. pil. iij. one every two hours—also ℞. supercarb sodæ ʒj. ol. sassafr. gr. v. tinct. opii. gt. l. aquæ pur. ℥vj. table spoonful every hour, beginning a few minutes after taking the first pill. In the evening, 3 doses of the mixture have been taken, and he is now pretty comfortable. Colomel has not operated." This patient was found convalescent next morning, having passed a considerable quantity of bilious matter, brought away no doubt by the calomel.

It was every now and then rumored that cases of cholera occurred in the practice of different physicians, during the winter; none, however, were reported to the health department, although it was said that they were well marked cases of cholera. Nothing remarkable occurred, under our own observation, until the month of May, at which time disease of the stomach and bowels became common; of which we have already given some account, in an epitome of cholera, published in our last number; to which we must refer our readers for particulars. Nothing worthy of notice occurred up to the 7th of June, that has not been noticed in the preceding number. On the 7th of June arrived the ship Brenda, from Liverpool, with 123 passengers, of whom 19 died on board. Fourteen, it was admitted by the captain, had died of cholera; but the disease had disappeared before the ship's arrival.

This arrival gave rise to great public excitement at Fell's Point, and placed the health officer in a very unpleasant situation. A large portion of the people had formed their opinions, and many were disposed to pay no respect to that of the health officer, or any other person; and the most extravagant and unreasonable projects were proposed for warding off, the supposed contagion of cholera. The health officer was early convinced that there was

no risk of importing cholera, but prudence, and, indeed, public tranquillity and safety, required that the prejudices of the people should be respected. No one could tell how soon the disease might make its appearance, and any accidental co-incidence, as to the arrivals of shipping and the disease, might have led to wrong impressions; and, in this way, for a time, the truth might have been obscured, and to many wholly concealed. Upon the whole, prudence dictated the propriety of conforming for some time to the wishes of the people. Such were the motives which influenced the consulting physician, though his mind was wholly made up, and we believe, such too were the motives of the board of health in sustaining the health officer, in his preventive measures. There was, however, still another cause for adopting every precaution, to guard against the admission of passengers, or shipping, under suspicious circumstances. Some of our sister cities were prepossessed with the belief of cholera being importable, and it therefore became necessary, as well on account of the respect due to our neighbors, as in self-defence, to adopt the same precautions as if we had been contagionists. We mean here, that a refusal on our part, might have shut us out from other ports. Hence it was that Baltimore vigilantly and faithfully, enforced quarantine regulations against cholera, when the Mayor, board of health, health officer, and consulting physician were decidedly non-contagionists. These early opinions, since more satisfactorily settled, were well calculated to lead to efficient measures. While others were trusting to prohibitory measures, our police was engaged, at an early period, in improving the condition of the city, by the removal of every thing which might tend to contaminate the atmosphere. In these salutary measures the City Council early showed a becoming zeal for the employment of preventive measures.

The City Council were convened by the Mayor, (Col. Wm. Steuart) in the month of June, and an ordinance was passed, and obtained the signature of the Mayor, on the 26th of that month—"An ordinance to preserve the health of the city of Baltimore, and for the due performance of quarantine at the port of Baltimore."

Section 1st, provides that every person arriving from sea, or coastwise, from a foreign country, or any place where any contagious or dangerous disease existed, should be detained at the quarantine ground, now removed to a distance of not less than a mile from the fort. But vessels free from suspicion might be permitted to come to the old guarantine ground, inside the fort, at the discretion of the health officer.

Section 2d, provides that "every vessel of every description, coming from any port within, or without the United States, where

any dangerous or contagious disease exists, or is suspected to exist, and every vessel in which any contagious or dangerous disease has existed, within thirty days previous to her arrival in the Patapsco river, shall remain at anchorage, to be designated as aforesaid, at least fourteen days, &c."

Section 3d, provides against vessels which, having sailed for other ports, had afterwards altered their destination, with intent to land at Baltimore. Under such circumstances they were compelled to ride quarantine at least thirty days; and a discretionary power given the health officer to detain longer if deemed necessary.

Section 4th, provides that no person shall be brought to the port of Baltimore, by steam boat or otherwise, within 14 days of their arrival from a foreign country.

Section 5th and 6th, provide severe penalties for violations of any of the foregoing ordinances.

Section 7th, gives a discretionary power to the health officer to permit persons to go on shore, provided ample security could be given, that they would not remain within three miles of the city, nor come into it.

With a view to relieve all passengers as far as circumstances would permit, from all unnecessary restraint or privations, a steam boat was procured for the purpose of relieving crowded vessels, and affording comfort to the sick. And another health officer was added to the quarantine office. By these measures much was done to render the situation of persons detained, as comfortable as the nature of the case would admit of, and no doubt much disease and mortality was thus obviated. The value of this humane measure may be appreciated, when we inform our readers that during the six months that our quarantine exists at Baltimore, beginning with the first of May, 11,946 passengers arrived at quarantine; and there was not a solitary case of cholera of malignant aspect, at the quarantine ground, nor among the shipping; a fact which, while it bespeaks much to the praise of the health officer, tends irrisistably to prove the non-contagious nature of the late epidemic.

On the 7th of July, the City Council passed "*an ordinance more effectually to promote and preserve the health of the city.*"

Section 1. *Be it enacted and ordained by the Mayor and City Council of Baltimore,* That there shall be appointed in the same manner as other city officers are appointed, seven additional Superintendents of streets, whose duties shall in all respects be the same as those of the present superintendents of streets and pumps, and there shall be one superintendent assigned under the direction of the Mayor to each Ward, and the said additional su-

perintendents shall continue in office for three months from the date of their appointments, and longer if the Mayor and Board of Health shall consider their services for a longer time necessary; and the said additional superintendents shall be entitled to compensation at the same rate that is paid to the present superintendents of streets and pumps.

Section 2. *Be it enacted and ordained*, That from and after the passage of this ordinance, it shall be the duty of the superintendents of streets, under the direction of the Board of Health, to visit and to inspect every street, lane, and alley, public or private, within their respective wards at least twice in every week, and have them cleaused, either by sweeping or scraping at every visit, and remove all the filth or dirt they may find in them, and to give their particular attention to the gutters and sewers, and to lime them copiously at each visit if necessary.

Section 3. *And be it enacted and ordained*, That it shall be the duty of the superintendents of streets to visit and inspect every cellar and yard in their respective wards as often as they may deem it necessary, and to cause to be removed at the expense of the occupier, or if there be no occupier, then at the expense of the owner or owners, all offensive and deleterious substances, and also to cause the walls of the cellars to be whitewashed, if necessary, at the expense of the tenant, or owner or owners as aforesaid, and report every case of neglect or refusal to the Commissioners of Health; and any person or persons refusing or omitting to obey the orders of a Commissioner of Health, to remove or whitewash as aforesaid, shall forfeit and pay the sum of two dollars for each and every such refusal or neglect; provided, nevertheless, that if it should appear to the said Board of Health that the said persons so receiving the said order, are unable to bear or pay the expense of such removal or whitewashing, or if no owner or occupier can be found, then and in such cases it shall be done at the expense of this corporation.

Section 4. *And be it enacted and ordained*, That it shall be the duty of the superintendents of streets under the direction of the Board of Health, to visit and examine at least twice a week, all vacant lots, lumber yards, brick yards, tan yards, slaughter houses, manufactories, distilleries, cattle yards, and hog pens, within their respective wards, and cause to be removed therefrom, at the expense of the owner or occupier, all vegetable and animal substances of an offensive or deleterious character; and every owner or occupier of any such lot, yard, manufactory, distillery, or pen, as aforesaid, who shall refuse or neglect to comply with a written or printed order of a commissioner of health within twelve hours after such order is given, shall forfeit and

pay therefor. on conviction, two dollars; and a further sum of two dollars for every hour such refusal or neglect shall continue.

Section 5. *And it enacted and ordained,* That it shall be the duty of superintendents of streets to examine the situation of the gutters within their respective wards, and report to the Health Commissioners when any of them may require repairs, to prevent or abate nuisances, and the Health Commissioners shall examine the condition of the gutters so reported to them, and if they shall be of opinion that they are likely to create nuisance by reason of their defective condition, they are hereby authorised to call upon the City Commissioners, whose duty it shall be upon such requisition, to have the gutters designated by the Health Commissioners immediately repaired, or the direction thereof changed in their discretion, the expense to be taken out of the sum of money hereinafter authorised to be borrowed.

Section 6. *And be it enacted and ordained,* That it shall be the duty of the superintendents of streets, with the consent of the Water Company, to open each of the Fire Plugs, and use the pumps in their respective wards at least once a week, and whilst the water is running from them, to have the gutters through which the water may be made to pass, thoroughly cleansed.

Section 7. *And be enacted and ordained,* That three days from and after the publication of this ordinance, it shall not be lawful for any person or persons, to dam up the water in any of the gutters of the city, nor to use the water in the said gutters, or in any part of them, for the purpose of wetting the said streets, or any part of them, and any person or persons who may be convicted of violating the provision of this section, shall forfeit and pay the sum of five dollars for every offence.

Section 8. *And be it enacted and ordained,* That it shall be the duty of the superintendents of streets, under the direction of the Commissioners of Health, to examine all the vaults and privies within their respective wards, and order them to be limed as often as necessary; and if the occupier of any tenement to which a vault or privy is attached, shall refuse or neglect to obey a written or printed order from a Commissioner of Health, to cleanse or lime the said vault or privy, within twelve hours after it is given, he or she shall be subject to a penalty of two dollars, and two dollars for every hour such refusal or neglect shall continue.

Section 9. *And be it enacted and ordained,* That it shall be the duty of the superintendents of streets, after the street manure has been removed to the place of deposit, to have it limed at least once a week.

Section 10. *And be it enacted and ordained,* That the provisions of this ordinance, and also the provisions of the ordinance, entitled, "A supplement to an ordinance entitled an ordinance

to preserve the health of the city of Baltimore, and for the due performance of Quarantine at the port of Baltimore, approved, 26th June, 1832, shall remain and continue in full force until the thirty-first day of October next, if the Mayor, the Consulting Physician, and the Board of Health shall deem them so long necessary; but if the Mayor, the Consulting Physician and the Board of Health, shall be of opinion that they can safely suspend the operation of the said ordinances, or either of them, or any part or parts of them, or of either of them, at an earlier period, they are hereby authorised in such case, at any time, and from time to time, to suspend them or any part or parts of them, or of either of them, and if the Mayor, the Consulting Physician and Board of Health shall be of opinion that they cannot safely suspend the operation of the said ordinances on or before the thirty-first day of October next, then they may continue them in full force for any longer period, which they may deem necessary and proper, and public notice shall be given by the Mayor of the continuation or suspension of the said ordinances, if he may deem it necessary.

Section 11. *And be it enacted and ordained*, That the Board of Health, with the approbation of the Mayor, be, and they are hereby authorised and directed to make an arrangement with the Maryland Hospital for the reception of such patients as may be sent by the Board of Health, and to rent or cause to be rented, or if they cannot be rented, to have erected, when and so long as in their opinion they may be necessary, any number of convenient buildings which may be required, to be used as hospitals, and to have the same thoroughly fitted and prepared for that purpose, with the necessary bedding and appurtenances, and so to locate them that they may be most accessible to the poor and desolate.

Section 12. *And be it enacted and ordained*, That when any building shall be engaged and prepared as aforesaid, the consulting Physician, with the approbation of the Mayor, be, and he is hereby authorised and directed to employ for each of the said hospitals, a competent and regular practising physician, and any number of attendants which may be required, and the said physicians, when so employed, shall be entitled to a compensation at the same rate that is now paid to the consulting physician of the city, and the said attendants shall be employed at a rate of compensation which the Mayor may deem reasonable; and the Commissioners of Health and Consulting Physician shall visit each of said hospitals daily and as many times during the day as possible.

Section 13. *And be it enacted and ordained*, That in addition to the buildings to be used as hospitals as aforesaid, the Mayor be and he is hereby authorised and directed to designate certain convenient stations in every neighbourhood which may be affect-

ed with the disease known by the name of the Asiatic Cholera, where the necessary medicines and curatives may be procured at all hours of the day and night, and the Mayor shall appoint one physician in each ward, when he shall deem it necessary, who shall attend such sick poor as are unable to procure medical aid, and unwilling to go to the hospital, and the Mayor is hereby authorised to allow such compensation for the services required to be rendered by this section as he may deem just and equitable, and to give public notice of the places so designed by publishing an accurate description of the same in all the newspapers published in the city, and by communicating to the watchmen and bailiffs the situation of each hospital and station within their respective wards or districts.

It will be seen by reference to section 11th, that the Board of Health, with the approbation of the Mayor, had power given them to rent, or *erect*, as many buildings as might by them be deemed necessary—and provision was also made, for furnishing each of the buildings so erected or rented, and fitted up, with the necessary bedding, &c.; and also appoint a physician, to take charge of each hospital. No one can be insensible to the enormous expense, which might readily have been incurred under this liberal ordinance.

The consulting physician, aware of the immense expenditure which would attend the establishment of any considerable number of hospitals; and aware, too, of the difficulty, if not the impossibility, of carrying an hospital almost to the door of every poor man; and believing that none but airy buildings, well located, would answer for hospitals, used his influence with the Mayor to limit the hospitals to two; and as a substitute for the remainder contemplated by the ordinance of the 7th of July, a dispensary establishment was proposed, to consist of 12 physicians.

Provision having been made by the city council, on the 7th July, for carrying this plan into effect, the Mayor appointed them accordingly, and called a meeting of the ward physicians, by him appointed, on the 13th of July, from which time they held themselves in readiness to act when called on; but their services did not commence till the 1st week of August. Soon after this three hospitals were organized by the Mayor and Board of Health, in the second week of August.

So far as we have been informed, the first cases of malignant cholera occurred in Baltimore on the 4th August. On this day, a little girl of respectability died suddenly; but we were not aware, at the time, of her having died of the cholera; but, we have since had reason to conclude, as well from the symptoms as reported to us, as from the disease having prevailed with great fatality in the immediate neighborhood, although a remarkably

healthy one, that such was the fact. On the same day, (4th August), a negro man, aged 84 years, died in Ruxton lane, of cholera, whom we saw a few hours before his death, and whose case we believed at the time to be malignant cholera. But being the first we had seen, we did not deem it prudent to insist on our opinion, or give it publicity, since we might be mistaken; it might possibly be a case of common cholera morbus; and this, indeed, was insisted on by one of our most respectable physicians. The body of this individual was examined without inviting the consulting physician to be present, and consequently he did not witness the dissection. About the same time a woman died suddenly with symptoms of cholera, but a post mortem appearance left room, it was said, to doubt whether this woman might not have died from the effects of a kick inflicted by her husband. A few days after this, we were requested by doctor Roberts to see a white boy affected with cholera, with some peculiarity of symptoms. He had eaten to excess of green corn, and other vegetables the day before we saw him—violent symptoms of cholera came on in the evening, and were suffered to progress during the night. Doctor Roberts found him greatly prostrated in the morning: We saw him in the forenoon, and found him cold, and almost pulseless, skin shrivelled, and a very singular degree of haggard appearance in the face, the face presenting a strange mixture of the features of youth, and the contractions of old age. This symptom existed in greater degree than in any case we saw. This patient lived two days after we saw him. He was declared by doctor Roberts to be alive, on the 9th of Aug., in the meeting of the medical faculty held at the city hall.

While two or three cases occurred strongly suspicious, but still denied to be cases of cholera, by some of our repecstable physicians, one of our newspapers announced the existence of cholera, which led to the following publication in the *Chronicle:*

"We learn from the attending physicians the following facts relative to the three negroes living in Ruxton lane, reported to be cases of *Cholera.*

One of them, a man eighty-four years of age, and subject to epileptic convulsion, lived in a miserable, filthy court. He was taken ill in the night, and had no medical attendance till morning. He died about noon.

A woman of exceedingly intemperate habits, and who, it appears, had been severely beaten, was taken ill in the morning, after having lain at night in a hovel exposed to the rain. She had no medical attendance till late in the afternoon, and died on the following morning. On dissection, she was found to have ruptured an important blood-vessel of the liver.

The third, who was taken to the hospital, was pronounced to be a case of ordinary cholera morbus, induced by imprudence.—He is now on the recovery.

It is unnecessary to mention to such as are acquainted with our localities, that Ruxton lane is one of the filthiest parts of the city, with the worst sort of population.

No other cases have been reported to the Board of Health."

"Since the above was put in type we have received the weekly report of the Board of Health, to which the following postscript is attached.

N. B. An Editorial paragraph having appeared in a morning paper, stating that three cases of cholera were reported to the Board of Health, as having occurred in Ruxton lane, it becomes necessary to state, in anticipation of the weekly report, that the cases alluded to are known to the Board of Health, and in their opinion, there is nothing in them calculated to alarm the citizens. The first was discovered on Saturday morning, having been intoxicated and exposed to the night air two nights before; he was immediately removed to the hospital, and is now in a fair way of recovery.

The second was an old man, 84 years of age, who had been ill with the premonitory symptoms for some days; he was taken ill at 6 o'clock, P. M., and his situation was unknown until the next morning, during which time he had no attendance whatever; he consequently died that day.

The third and last case was that of a woman who was taken ill some time during Saturday night, and expired on Sunday night, in about sixteen hours. In this case, however, upon a post mortem examination, it was ascertained, that she had received a blow or kick upon her left side, which might have produced death, had there been no other cause. *All three* of those cases were colored persons of the most intemperate habits.

By order, DAVID HARRIS, Secretary."

Two days after the above publication, that is, on the 9th of Aug., the Mayor called a meeting of the physicians of the city, which was well attended. Nothing positive grew out of the meeting—it was found that but few had seen any thing of the disease, and a considerable number were decidedly opposed to the belief of the existence of epidemic cholera in our city. Indeed, an attempt was made to pass a resolution declaring, as the opinion of the meeting, that, the cholera did not exist among us. This measure was opposed by the consulting physician, who assured his brethren, that he had seen one case of cholera at the hospital No. I., the patient died on the 5th inst. He declared that this case was most certainly different in its symptoms from any thing he had seen in a practice of upwards of 30 years.—

For the particulars of this case, we must refer our readers to the Appendix, letter D. It may not be amiss, however, to state here, that the consulting physician insisted, in the most decided manner, on the opinion which he had formed that, the disease did actually exist, in the city in a very limited degree, and preceded and associated as it was with cholerine, there could be no hope of escaping an epidemic.

It may be asked here, why did not the Board of Health announce this case? It will be seen by the article just quoted from the Chronicle, that the Board of Health admitted the existence of doubtful cases, all of which had occurred before the 7th of August. The case which terminated on the 5th, at the hospital, not being included in the list from the Chronicle, needed no remarks from the Board of Health. This case was, however, included in the first weekly report of interments after the occurrence of epidemic cholera.

It is due to the board of health to say, that they were desirous of making daily reports, from the commencement of cholera cases, but the consulting physician was decidedly opposed to the measure, not however because he had any desire to conceal the truth, but he believed that less alarm would attend weekly reports, than daily reports. It seemed now to be fully settled that, the disease was not contagious; no possible good could then arise from going out of the usual method of reporting weekly. It was urged that the people expected it, and would be dissatisfied without the daily reports. It does not seem necessary to extend our remarks on this part of our subject—it was the opinion of the consulting physician, that no good could arise from daily reports, but that it might do harm. He was overruled. No one, connected with the board of health, will assert however, that he had the slightest desire to conceal any information, after he was satisfied that cholera was becoming epidemic. He wished to lessen the terror likely to arise from reports, by making them at the usual periods. Besides he was impressed with the belief that, daily reports were made originally, because the disease was supposed to be contagious, to have concealed a case under such circumstances, a single hour, would have been in the highest degree criminal: but why raise an alarm for no good purpose?

It will be found upon reference to the weekly reports of interments, that twelve cases of death from cholera, were reported on the 13th of August, which number includes all the cases that came to the knowledge of the board of health. The 20th of the same month terminated the second week, during which fifty-five cases were reported. The board of health commenced their measures for making daily reports on the 17th, but they became

sufficiently efficient on the 21st; on which day commenced daily reports, and they were continued to the end of the disease.

Much mistrust and want of confidence, have been expressed against the public authorities, and sometimes by persons who ought to have known better, than to charge men of fair character with conduct so base, as to deceive the public, although they acted under the solemn obligation of an oath. What motive, it may be asked, could the board of health have to deceive the public? That cases might pass or escape their notice, in a time of hurry and confusion, may readily be admitted, but if there were such, they could not be numerous, and none were concealed by them; on the contrary, every exertion was made to give correct information to the public. There were not wanting those who seemed to desire an enlarged list from day to day. False reports were circulated time after time, stating that people were dying by hundreds, and that the dead were promiscuously hurried to the grave; without any notice of their deaths. But, nevertheless, it pleased the Almighty to deal favorably with us, since this disease, so unmanageable in some cases, and clothed with all the horrors which death can present, in his most terrific aspect, terminated its ravages with an amount of mortality very far below what had been apprehended. Indeed, this seems to be one of the characteristics of the disease, that is, to excite fearful apprehensions, by its deadly virulence, as seen in a few cases; and, yet, when it has expended its fury, we find the mortality has never been very great—doubtless much of this is owing to modern science, adapted with equal skill and care to the means of prevention, and to the cure of cholera. And, indeed, we have been led to believe, that this disease is, in an especial manner, rendered mild by preventive measures, that do not serve to prevent its occurrence, in its milder forms. Nothing appeared more satisfactorily to my mind than the fact, that most of the malignant cases occurred in the persons of those who were imprudent in their food or drink.

On the 10th of August, the Mayor, agreeably to an ordinance of the 7th July, appointed ward apothecaries, for the purpose of supplying the ward physicians with medicines for their patients; and these physicians were now set to business. All we believe performed their duty faithfully; some of them had severe duties to perform; but, vigilance and a zealous devotion to the sick, were not confined to the ward physicians—many of the physicians of the city deserve the praise and thanks of the citizens, for their philanthropic devotion to the sufferings of the poor.

It was the duty of the ward physicians to attend those who were unable to pay a physician, and unwilling to go to the hospitals. A very large class of the people came under the terms of

this ordinance, and no doubt very many lives were thus saved, that would have been lost without such provision, since many could not consent to be removed from their own houses; and, indeed, often it was necessary that aid should be furnished more quickly, than going to the hospitals would admit of. In a word, this establishment was found eminently useful, and was vastly more economical than that of numerous hospitals. So sensible were the City Council of the utility of this plan, that they sometime in September, passed an ordinance preventing the Mayor from establishing any more hospitals, than the three then in operation.

Surely every one must agree with us when we express our extreme thankfulness, for the lightness of our affliction as a whole community, however poignant the distress of a few who suffered the loss of dearest friends. The present writer has been made to feel the keenest anguish, and to sympathise with some kind friends, in their loses, by losing a promising son, who died from home an innocent victim.

In the city of Baltimore there died of cholera, during the summer of 1832, eight hundred and fifty-three persons, a very great majority of whom were the most worthless; but a few of our best citizens were its victims. Here then is a mortality of about one in 96; and, of persons of respectability, one, we believe, in a thousand.

The citizens may look back upon the visitation of last summer with feelings the most grateful to a kind providence; and they have much reason to cherish the best wishes for those who devised the ways and means, and those who executed the necessary measures in the time of trial.

A great majority of our police officers, and our merchants and citizens generally, early espoused the belief of cholera being an epidemic, not communicable by contagion. Such a conviction prevailing very generally, led to important consequences, since instead of enacting useless prohibitory laws, against persons and suspected goods, they turned their attention to measures for purification of the atmosphere of the city. It will be seen by reference to the ordinances published in this article, page 374, that additional measures for purification were early employed.

By such a course of procedure, our city authorities were well prepared to meet the disease, which it is well known delights to dwell in foul places, and amid the haunts of the vile. As a proof of the good sense of our more sensible citizens, we would mention a circumstance strongly in point. An attempt having been made by a neighboring city, to get up a general meeting of physicians in the city of New York, for the purpose of examining into the nature of cholera, as relates to the question of contagion, and the board of

health of Baltimore having been invited to send members to this meeting, were willing to ascertain the sentiments of the merchants of this city, although they did not deem the measure necessary, or likely to lead to any useful result. Wm. Lorman, Esq. having been requested to ascertain the opinion of this respectable body of citizens, returned for answer that the merchants of Baltimore, reposing full confidence in the board of health, were willing to submit to their measures; but having been asked for an opinion, they gave as their opinion that it would be most prudent to meet the disease as circumstances might require, and that no necessity seemed to exist for sending on deputies.

It may not be unimportant to inform our readers that our measures were not more remarkable for their efficiency, than they were for the economy with which they were conducted on an extensive scale to a happy termination. The City Council provided a fund of forty thousand dollars. This was in part expended upon permanent improvements. Fourteen thousand dollars were expended in paving gutters, &c. This sum taken from forty thousand dollars, with a small balance on hand, leaves less than twenty-six thousand dollars, which was expended on measures of purification, and in providing for the sick poor. When we look to any of our sister cities, and compare the expenditures, the amount of disease, the number supported at the hospitals, the vast amount of attention to the poor at their homes, &c. we may well feel proud that we, in following a plan of our own, have obtained the most good with the least expense. Among the humane measures, we must not forget that of the Mayor, directing the ward apothecaries to furnish medicines to all physicians who were good enough to attend any of the poor gratuitously.

We shall now proceed to present a summary of the cases admitted at the hospitals, together with a brief exposition of the practice found most efficacious at hospitals No. 1 and 2. Having thus concluded our historical remarks, we shall again take up the subject of the epidemic in a more strictly medical sense, and offer some observations upon our experience, both public and private.

The following correspondence between the board of health of Savannah, and the board of health of Baltimore, will, perhaps, interest our readers, as it resulted in a brief statement of the settled practice pursued at hospitals No. 1 and 2; and because, at this late period of the season, the board of health of Baltimore were enabled to judge of the merits of the practice recommended, and they aver that it had been successful to a satisfactory amount.

The application from our neighbors having come to hand at a time when the consulting physician could not possibly attend to

the call, owing to an extreme pressure of engagements, he requested doctor Carrere to do him the favor to draw up a statement of our practice, &c. The letter of doctor Carrere follows, and we may have occasion hereafter to notice some of the items more fully, than was done by the Doctor, whose time was engrossed too much to admit of any thing more being done than a very brief exhibition of what was deemed most useful.

SAVANNAH, August 31, 1832.

To the President of the Board of Health of the city of Baltimore.

SIR—Under a resolution of the board of health for the city of Savannah, passed at their regular meeting on the 30th inst. we were appointed their committee to open a correspondence, and to collect all the information in our power, as early as practicable, as to the nature and most approved treatment of the disease, commonly known as the Asiatic cholera, and which has made its appearance in your city.

Believing as our board do, that this scourge will, in all probability, visit our Southern country, they feel it an act of duty and humanity, incumbent on them, to procure for the relief of their fellow citizens in this city, such correct and useful information on the nature and treatment of this new disease, as from the experience you have acquired, may have been found most efficient in arresting its dissolating course. This appeal they believe will not be made in vain.

The committee on behalf of the board of health of our city, will therefore esteem it as a favor if, as early as practicable, you will furnish them with as full and correct an account, as may be in your power, of this destructive disease, called the cholera Asiatica, or Asphyxia, and as it has appeared among your citizens. Particularly its symptoms, whether premonitory or otherwise—their character, whether general or partial, during the progress of the disease? The best and most efficient treatment, and that which has proved most effectual in the cure—also the post mortem appearances upon examination; together with such other particular or general information on this interesting subject, as you may be able to communicate.

Deeply sympathising with you in the ravages which this awful disease has made among the inhabitants of your city,

We subscribe ourselves your obedient servants,

CHARLES S. HENRY, Chairman B. H.
O. STEPHENS,
J. GEORGE,
J. K. TEFFT.

[Copy of answers to the foregoing.]

HEALTH OFFICE, *Baltimore, Sept.* 25, 1832.

To Charles S. Henry, Esq,
Chairman of the Board of Health, Savannah.

SIR—Your letter of the 31st ult. postmarked Sept. 6th, came to hand on the 13th inst. and the contents thereof were duly noticed, but, owing to the great press of business in this office, as well as on the part of the consulting physician, and at the hospitals, it was not in our power to furnish you with the desired information at an earlier day. You will, therefore, please receive the foregoing as our apology.

The enclosed statement made by doctor Carrere, of hospital No. 2, may be relied on as strictly correct—the treatment has been in practice to a considerable extent, and has been found very successful.

The accompanying correspondence between the consulting physician and doctor Carrere, will explain the course which we have adopted with a view of furnishing such information as the opportunity of this board has afforded.

The board have the satisfaction to inform you that the cholera is abating in our city, and we have good reason to believe that if the citizens could be prevailed on to refrain from the use of fruits and vegetables of every description, either raw or cooked, the disease would, in a few days, entirely disappear.

Very respectfully. By order.
DAV. HARRIS, Secretary.

Observations on Cholera made at Hospital No. 2, at Baltimore, in a letter from doctor Carrere, of Baltimore, to the board of health of Savannah.

The disease, I am disposed to believe, to be of a bilious nature, of an aggravated form. Those laboring under it, have generally had some affection of the bowels, (either in the form of diarrhea or dysentery) for one or more days prior to the rice water discharges by the mouth and by stool. When taken, the patients generally complain of an oppression at the precordia, spasms of the stomach, arms and legs, pain in the head and back, tongue furred white or yellow, no urine passed in a short time after the attack; the pulse is full and tense. In such cases I have derived the greatest benefit from the free use of the lancet, until the spasms and pain in the head and back are relieved, and until there is a change in the color of the blood, which is at first of a very black color—then commence with the use of calomel and opium, in doses of 10 to 20 grs. of the former, with ½ to 3 grs. of

the latter for the first dose—then calomel and nitre, 10 grs. of calomel and 5 grs. of nitre, every half hour for several doses, then every hour, until there are bilious discharges, to be assisted by castor oil, senna, manna, and salts, rhubarb and aloes, &c. and if torpor of the bowels, which sometimes happens, scammony, gamboge, and croton oil have been serviceable—in cases of the yellow coating on the tongue, I have been obliged to use the *aloes* for a much longer time than is usually done. The nitrate of potash, I have generally found to produce the secretion of urine in a day or two.

In the collapsed stage, we have the rice water discharges very profuse, pulse feeble, and in some cases barely perceptible, in others' absent; spasms of the stomach, arms and legs; tongue cool or cold as ice; oppression at the precordia; extremities cold and bathed in cold clammy sweats; great thirst and sense of heat, when the whole surface is to the physician and attendants as cold as *ice*—they are constantly asking for cold water, even until a few minutes before their death—when it has been given to them, it has invariably produced great restlessness.

In such cases we commence with the calomel and opium for the first dose, then the calomel and nitre were continued as in the first stage—where ptyalism has taken place, I have generally found the patients to recover. In cases where they are bathed in the cold clammy sweat, I have derived the greatest benefit from the use of warm lard, well rubbed in on the arms and legs, and repeated as often as it is absorbed or the perspiration returns, previously drying those parts well with a piece of flannel or towel. To allay the irritability of the stomach, I have made use of the following mixture. ℞ Super carbonat. sodæ ʒi. ol. sassafras gtt. v., tinct. opii gtt. lxx., aquæ ℥ vi. m., a table spoonful to be given every half hour, hour, or two hours, according to circumstances, assisted by the effervescing mixture, sinapisms and epispastics. For the suggestion of the use of the *lard and the saline mixture*, I am indebted to Dr. H. G. Jameson, consulting physician to the city. Dry heat has been applied to the extremities, but I cannot say much in its favor, owing to the great restlessness of the patients. Tonics and diffusable stimulants have been tried, but were not found useful, and have been laid aside for upwards of a month. During convalescence, particular care should be paid to the diet. Three patients who were doing very well for five days, and to each of whom a very small piece of bread was given; relapsed in a very few hours after eating it, and died.

Post Mortem Examinations.—In general I have found the vessels of the brain very much injected, especially in persons of intemperate habits—the lungs were generally found flaccid, nearly natural in color—the heart, generally speaking, bloodless, when

any was found, it was of a very black color and viscid—the liver pale and little or no blood in it—the gall bladder generally very much distended with viscid bile—the stomach very much congested, and presented blotches, sometimes dark, generally reddened by injection of the inner coat—the spleen bloodless—the intestines very much congested, especially the ileum, and much reddened by injection of the vessels of the inner coat—the kidney very flaccid—no urine, nor urinous smell—the bladder contracted to the size of a walnut.

P. S. My examinations were not as minute as they should have been, as they were generally made alone. I was very much hurried, having at that time a number of patients in the hospital.*

EWD. W. CARRERE.

* We are not able to say what proportion of cases were dissected by doctor Carrere alone. We know that he was indefatigable in his labors, but we know that several were examined in the presence of, and sometimes with the assistance of Professor Annan and the consulting physician, the latter of whom was first enabled to reduce his treatment of the disease, to a simple and successful plan, by the morbid appearances seen in the above examinations.

HOSPITAL No. 1.

The number of deaths and length of time in the Hospital.

When admitted.		Names.	No.	Date of death.	Minutes.	Hours.	Days.
Aug.	8	Thomas Brown,	1	Aug. 8		9	
	14	Thomas Baily	2	14		8	
	15	Israel Clark,	3	19			5
	16	Lambert,	4	16		5	
	17	Jane Ringgold,	5	23			7
	19	John Coats,	6	22			4
	20	Jane Thomas,	7	21			2
	22	Milley Mattox,	8	22		11	
	22	Ann ———,	9	22		7	
	22	Levi Grimes,	10	30			9
	23	John Dowling,	11	23		4	
	24	Saml. Geddes,	12	28			5
	24	Ann Berry,	13	24		1	
	25	Adeline Lane,	14	25	20		
	25	Rachel Travers,	15	25		2	
	25	Wm. Belcher,	16	27			3
	27	Thomas Meredith,	17	Sep. 7			12
	28	Eliza Butler,	18	Aug. 28		3	
	29	Rachel Rusk,	19	29		5	
	30	Charles M'Donald,	20	30		2	
	31	John Lewis,	21	Sept. 1			2
Sept.	1	Polly Hamilton,	22	1	15		
	1	Rosanna Rupert,	23	7			7
	1	Maria Carnes,	24	4			4
	2	Eliza Cornish,	25	Sept. 2	20		
	2	Patrick Hart,	26	3			2
	2	Henry Fellows,	27	3			2
	2	Sarah Smith,	28	5			4
	3	James Connelly,	29	8			6
	4	Margaret Connelly,	30	12			9
	4	Peggy Beson,	31	4	15		
	4	Jenny Stakes,	32	6			3
	5	Margaret Broome,	33	11			7
	5	Robert McClure,	34	5		1	
	6	Sarah Gambrill,	35	7			2
	6	Elizabeth Holton,	36	7			2

HOSPITAL No. 1.—Continued.

When admitted.		Names.	No.	Date of death.	Minutes.	Hours.	Days.
Sept.	6	Gawen Frew,	37	Sept. 9			4
	7	Jackson Duff,	38	12			6
	7	Mrs. Fennell,	39	7	30		
	7	Henry Moore,	40	8		8	
	8	Thomas Hynes,	41	11			4
	8	Henry Margolin,	42	12			5
	8	Mr. Campbell,	43	8		2	
	9	Matilda Duff,	44	26			18
	9	Mrs. Keever,	45	10			2
	9	Jane Richards,	46	10			2
	10	Dorcas Armstrong,	47	10	15		
	10	Charles Jones,	48	11		11	
	10	Priscilla Richards,	49	11		14	
	12	Phillis Ferson,	50	13			2
	12	Edward Barnet,	51	13		18	
	13	Cæsar May,	52	14		7	
	16	Newton Savill,	53	20			5
	17	Samuel Pack,	53	17	20		
	18	Sarah Brown,	55	20			3
	18	Patrick M'Cambridge,	56	19		7	
	20	Mrs. Finley,	57	20		9	
	20	Mary Webber,	58	21		18	
	22	Edward Weaver,	59	23		15	
	24	Hester Dorsey,	60	26			2
	25	Priscilla Jones,	61	28			3
	25	James Dyer,	62	27			2
	28	Catharine Graves,	63	Oct. 8			11
	29	Matilda Poole,	64	Sep. 30		16	
	29	Matilda ———,	65	Oct. 3			4
Oct.	1	Charles Dorsey,	66	1	40		
	13	Polly ———,	67	13		1	
	13	Laurence Cholhaus,	68	14		18	

Total number of deaths 68.

Of which number, 3 died in 15 minutes; 3 do. 20 do.; 1 do. 30 do.; 1 do. 40 do; 3 died in 1 hour; 3 do. 2 do.; 1 do. 3 do.; 1 do. 4 do.; 2 do. 5 do.; 3 do. 7 do.; 2 do. 8 do.; 2 do. 9 do.; 2 do. 11 do.; 1 do. 14 do.; 1 do. 15 do.; 1 do. 16 do.; 3 do. 18 do.; 11 died in 2 days; 4 do. 3 do.; 6 do. 4 do.; 4 do. 5 do.; 2 do. 6 do.; 3 do. 7 do.; 2 do. 9 do.; 1 do. 11 do.; 1 do. 12 do.; 1 do. 18 do.

Admitted 147—died 68—discharged cured 79.

GEO. B. MACKENZIE, M. D.

HOSPITAL No. 2.

The number of deaths and the length of time in the house.

When admitted.	Names.	No.	Date of death.	Minutes.	Hours.	Days.
Aug. 11	Aaron Adrion,	1	Aug. 11		3	
11	Saml. Cheers,	2	12			1
12	Matilda Jackson,	3	15			3
13	Clementina Murphy,	4	25			12
14	Rich'd. Holliday,	5	14		4	
14	Rich'd. Lee,	6	19			5
15	Joseph Brown,	7	15		3	
15	Margaret Woodyear,	8	16			1
16	Andrew Shreck,	9	16		9	
17	—— West,	10	22			5
17	Ann Lerew,	11	24			7
19	Mary Briell,	12	19		12	
19	Ephraim Johnson,	13	19		1	
19	Sarah Sharp,	14	19		7	
20	Philip Taylor,	15	22			2
20	Mrs. Miller,	16	20		8	
20	William Mathews,	17	20		6	
20	Francis M'Kenna,	18	21			1
21	Mrs. M'Cready,	19	21		14	
21	James Brooks,	20	21		4	
21	Catharine Holbrook,	21	22		12	
21	John Donoho,	22	22			1
21	Martha Pitt,	23	21	5		
23	Eliza Miller,	24	27			4
23	Mary Biays,	25	23		3	
23	Cornelius M'Manus,	26	23		1	
24	Eliza Mocans,	27	24		2	
24	Elizabeth Jackson,	28	25		5	
24	Isabella Robinson,	29	Sept. 9			16
25	Ellen Hackett,	30	Aug. 27			2
29	Eliza Bond,	31	30		8	
30	William Slater,	32	30		2	
30	Thomas Lucas,	33	30		4	
30	Harriet Herbert,	34	Sept. 4			5
30	Thomas Neale,	35	Aug. 30		12	
30	John Hall,	36	30		12	
31	Danl. Picket,	37	31		4	

HOSTITAL No. 2.—Continued.

When admitted.	Names.	No.	Date of death.	Minutes.	Hours.	Days.
Aug. 31	George Dorsey,	38	Aug. 31	5		
31	Caleb Gill,	39	Sept. 4			4
31	Grace Miller,	40	Aug. 31		2	
31	Ann Watkins,	41	31		3	
Sept. 1	Nelly Zere,	42	Sept. 1		2	
1	Philip Johnson,	43	1		4	
1	Charles Moore,	44	11			11
2	Stephen Gill,	45	2		8	
3	Patty Gale,	46	3		6	
4	Felecia Jones,	47	11			7
5	Mary A. Jackson,	48	5		5	
6	Eliza Dorsey,	49	6		6	
7	Charles M'Daniel,	50	8			1
8	George Marshall,	51	9			1
9	Sarah Packlett,	52	9		7	
10	James Hughes,	53	11			1
11	Sally Mathews,	54	11		8	
12	John Thompson,	55	12		10	
13	Wm. Ingham,	56	14		14	
14	George Smith,	57	14	30		
14	Sally Johnson,	58	14		5	
20	William Dorsey,	59	20		5	
20	Debby Hurley,	60	Oct. 2			12
28	Airy Neilson,	61	Sep. 29		9	
30	Priscilla Thompson,	62	Oct. 1		10	
Oct. 15	Randolph Johnson,	63	16		15	
18	Hugh Hurleston,	64	18		10	
23	Susan Aitken,	65	26			3

Total number of deaths 65.

Of which number 2 died in 5 minutes; 1 do. 30 do.; 2 died in 1 hour; 4 do. 2 do.; 4 do. 3 do.; 5 do. 4 do.; 4 do. 5 do.; 3 do. 6 do.; 2 do. 7 do.; 4 do. 8 do.; 2 do. 9 do.; 3 do. 10 do.; 4 do. 12 do.; 2 do. 14 do.; 1 do. 15 do.; 7 died in 1 day; 2 do. 2 do.; 2 do. 3 do.; 2 do. 4 do.; 3 do. 5 do.; 2 do. 7 do.; 1 do. 11 do.; 2 do. 12 do.; 1 do. 16 do.

Total number received 145—died 65—discharged cured 80.

EDW. W. CARRERE, M. D.

List of cases admitted at the Cholera Hospital No. 2—intended to show, by giving the places of residence, how extensively the disease pervaded our city. This list also exhibits the number of intemperate persons, as far as could be clearly ascertained: a good many patients were admitted in a condition which disabled them from affording any information whatever:—

Betty Buckler, intemperate, Lombard and Charles sts.; Aaron Adrian, Ruxton lane; Justus Wright, intemperate, Sharp street; Samuel Cooper, Franklin lane; Samuel Cheers, Ruxton lane; Matilda Jackson, intemperate, Washington road; Samuel Branson, Ruxton lane; Sarah Branson, do; Mary McGotten, intemperate, Paca-st. watch house; Eliza Ross, do. French alley; John Miller, do. do.; Clementina Murphy, in a field near the hospital; James McBride, Light street; Richard Holliday, Smith's wharf; Christiana Howard, intemperate, French alley; Richard Lee, Hill-st.; Frank Johnson, French alley; James Brown, Ruxton lane; Margaret Woodyear, Grant st.; Andrew Shreck, intemperate, Light and Lombard sts.; George Shumaker, Barre st.; Mr. West, intemperate; Ann Lerew, do. Ruxton lane; Thomas Lerew, do. Light street; Mary Briell, Light street; Ephraim Johnson, do; Sarah Sharp, Lombard street; Nancy Mosher, intemperate, Ellicott street; John Riley, do. York road; Philip Taylor, do. Tyson alley, Wm. Mathews; do. Gallow's hill; Mrs. Miller, do. in the hospital; Francis McKenna, Light street, just from Philadelphia; Mrs. McCready, intemperate, Hillen street, but from the watch house; James Brooks, Long alley; Catharine Holbrook, do.; John Donaho, intemperate, Camden and Light; Martha Pitt, Busy alley; Eliza Miller, intemperate, Ross street; Mary Biays, Uhler's alley; Hall Britton, Federal hill; Julia Gorman, Light street; Cornelius McManus, intemperate, Howard's park; Eliza Mocans, Charles street; Elizabeth Johnson, intemperate, Lee street; Catharine McGuire, Light and Ruxton; Isabella Robinson, Howard and Conway; Ellen Hackett, Sharp and Hill sts; Jane Smull, Bank street; James Steinwitz, intemperate, Mulberry and Howard; Cena Thomas, Lombard street; Eliza Bond, Union street; Mary Riley, intemperate, Howard's park & Mill st.; Wm. Slater, intemperate, Light street; Thomas Lucas, Susquehannah Rail-road depot; Lydia Brooks, supposed to be intemperate, Barre street; Harriet Herbert, intemperate, Fort road; Thos. Neal, do. Frogtown; John Hall, do. Ross street; Daniel Pickett, Light street; George Dorrey, Run alley; Caleb Gill, intemperate, Light street; Grace Miller, Saratoga street; Ann Watkins, do; Mrs. Gardner, Camden street; Nelly Joyce, or Zere, Hookstown road; Philip Johnson, Ross street; Charles Moore, direct from Phila-

to bury their crimes and misdeeds in oblivion, while the good hail with pleasure, often commingled with gratitude, periods in which some virtuous or interesting occurrence took place; and hence the advantage of a suitable commemoration of periods that were marked with something useful to mankind.

In a christian community we look first for the commemoration of every 7th day, because we have been told by an authority paramount to all others, that it is the sabbath; and, no christian can be insensible to the vast amount of good which we derive from a proper observance of this period, of all others the most sacred; because revelation tells us, it has been sanctified by the decree of God, the maker and sustainer of time itself!

We need not stop to particularize the various epochs which have long been commemorated by the Jews, and other nations. In this country where conscience is free to adopt and sustain opinions, agreeably to our own views of things; provided only, that we do not violate the conscience or disturb the peace of others, we have no religious periods other than those imposed on us by the Bible; and even here no one is universally binding except the sabbath. The Jew is unmolested in his observance of the last day of the week, and his various other periods of religious observance, while the christians, of various denominations, observe different periods, or none at all, as to each may seem proper. In a national capacity, however, it seems meet that we remember the 4th of July, because it commemorates the birth-day of our national liberty—may we long! very long! cherish the recollections of the interesting day, when man was first, in very deed, made lord of the earth. It will sooner or later be conceded, that the rights of man were first understood and enjoyed in this happy land, which was purchased, so to speak, on the 4th day of July 1776, by the blood of our forefathers.

By this preamble we would awaken the attention of this audience to the custom, and the usefulness of the custom, of setting aside periods for recalling the past with a view of endeavoring thereby to improve the future. If the christian may derive profit and comfort from a survey of each preceding day as he reviews, in his evening contemplations, the past with a view of improving the future, the student derives no less profit in amount. If men, in their secular concerns, generally find it convenient and profitable to adjust their concerns at the close of each calender year, may we the professors, and the students of this institution, not likewise derive a share of satisfaction, and some advantage, from examining with peculiar care this interesting period of our collegiate year.

It will be conceded that ours is a progressive science; does it not therefore seem proper that we the professors, and you the students of this college, should devote the present week, commencing with this day, to the investigation of what we have done since we were assembled in this Hall, on this day last year? As professors we may profitably inquire, whether we have improved our time so as to keep pace with the progression of our science, and laid in new stores of knowledge, suitable for the very important office which we have taken upon ourselves, viz: that of ameliorating the sufferings of mankind from disease, by imparting knowledge to others. None, surely, will question the truth of the position, of which I would now remind you, that the cultivation of the science and practice of medicine is, in point of usefulness and importance, second to none connected with the present condition of mankind. If such be the duties of the professors, and such the usefulness and importance of our science, how obviously does it appear that the student has duties to perform, during the session of lectures, paramount to all others of a secular nature. May it not be good that we are here assembled to commune together, on the subject of the great charge already in our hands, and about to pass into yours?—May it not be profitable for you to inquire, at this interesting epoch, because it is our anniversary? whether during the past year you have so employed your time as best to improve your medical knowledge? Those of you who have made some progress in the study of medicine may be reminded, perhaps, of the youth who, at the end of one year's study, knew all things, began to doubt his proficiency at the termination of the second, and found he knew very little at the end of the third year—you may admit this as a general truth, and still feel no discouragement, since the fact is, that, we must know much before we ripen the judgment; and as it ripens, we find much that was taken for truth, or as being important in its nature, to be but waking dreams, or things but half understood, or, perhaps, unimportant. It is not, therefore, to be supposed that our first acquirements are of little value—it is principally from simple things, and a more careful and sober application of our rudimental knowledge, that we become distrustful of our knowledge; and are enabled to appreciate the multifarious items, which pass in review, to some correct or useful purpose, or reject it as fallacious. It is thus that we winnow the wheat from the chaff, as we proceed in the accumulation of knowledge—you have every thing then to hope for from diligent industry and perseverance. It behooves you carefully to bear in mind, that, nothing but close attention to your studies can enable you to acquire such proficiency in the study of medicine, as will secure to you reputation,

and a fair and reasonable compensation for your professional services, when you shall have entered upon your practical career—Such being the case, let me advise you to imagine to-day, that you stand upon a fixed basis, where you may look back upon the past year with a view of correcting what you have seen amiss, and of imitating what you can approve, and to the latter add much before this epoch shall again add a year to the span of your existence: since art is long and life is short, it is both ignoble and and unwise not to improve our time, by a reasonable attention to such things as are known to be conducive to the well-being of mankind.

The present year has been marked by circumstances calculated in a peculiar manner, to render it memorable in the annals of history. This year has furnished matter for the most serious contemplation on the part of the physician, the historian, the divine, and, indeed, for every rational member of the human family; nor need we omit the miscreant quack, who in many instances has unblushingly, nay with the most daring effrontery, palmed nostrums upon an affrighted public!—We are sorry to add here, that, in this free and enlightened country, there is too much reason for believing, that quackery has flourished most; but I forbear to dwell upon a subject so repulsive to common sense, and to the feelings of every calm and humane observer.

I need scarcely stop here to tell my audience that, this year has been rendered memorable by the existence of Epidemic Cholera, throughout a large portion of our country. Every philanthropist will long mourn, for the desolation in the family of mankind—and many relatives will remember the year 1832 with the deepest grief. Perhaps there is not a person present, who does not deplore the loss of some near and dear relative or friend.

Such being the fact, that, human life has been laid waste, during a part of the present year, by a new and appalling disease; and, as we already intimated, that, it is rational and profitable occasionally to cast a retrospective view over the affairs around us, with a view of turning every thing to good account, we trust, we may be usefully employed, in giving a brief outline of the nature of the desolating plague, which has rapidly overrun a large portion of Europe, within the last three years; and, also, carried much destruction throughout a large portion of America.

In turning my attention for a few minutes to the subject of Epidemic Cholera, it may be remarked, that, although it is a new disease to us, and to the present generation of people in Europe, it is by no means a new disease. Medical history furnishes instances of the existence of epidemics which existed, through-

out a large part of Europe, similar, as far as we can judge, to the present epidemic, at different periods of time.

I am not aware of there being any well authenticated and satisfactory account of the existence of this disease in Europe, until within the last three years; when, it suddenly invaded the southern parts of Russia, and, from that time it has somewhat gradually, though with great irregularity, spread over the greater part of that extensive country; from thence it entered Poland, Prussia, Austria, Germany—crossing the North Sea it ravaged the greater part of Great Britain and France, and lastly, this desolating pestilence entered our country, and continues its destructive influence, from city to city, and from town to town, while, here and there, it attacks persons in the interior or country situations.

It is an astonishing fact that the cause, whatever be its nature, has been pretty regularly getting on to the Westward, and in its course, seems to have kept in pretty high northern latitudes. So much has this been the case, that it would naturally lead the superficial observer, to suppose that the atmospherical poison had originated in the East, and gradually passed Westward; since the latitude in which it first appeared in this country, pretty nearly corresponds with that in which it had last existed in Great Britain. I now allude to London, and Quebec, and Montreal. There is, however, the most satisfactory proof that the disease, or rather its cause, is not migratory. It may suffice to mention, that notwithstanding that, we, in this country, have had intercourse with several places in Europe, during the last three years, in which cholera existed, that there is not a solitary case, well authenticated, of a person arriving on our shores affected with cholera. There were instances where the crews or passengers of vessels leaving infected cities in Europe, suffered severely by the disease, for several days after leaving port, and yet, in every instance, before they arrived in this country, the disease had disappeared. These cases were attended with this circumstance, that, however great the number of persons on board, but a moderate number were affected; thus showing that, the sea air was not contaminated; and, that the cases on board were the consequence of previous exposure in port. Nor should we forget the considerable number of persons employed in the Newfoundland fisheries, who were not molested by the disease; and, if we were to imagine that the poison had been driven Westward by the winds, these people would have been more or less in its course, in its passage from the Western coast of Scotland and Ireland, towards Canada, to say nothing of the vast amount of shipping. It is therefore ascertained, that this disease is non-migratory.

The operation of the poison is not more remarkable for the fact of its occasional irregularities, in striking off to the side of its main course, or sometimes turning back to places that it seemed to have passed over, than it is for the uncertainty of its degree of violence. To use the language of a celebrated author, it seems to have been uniformly variable in every feature of its character.

Thus, if its general course was along the margin of rivers, and the more fertile situations of different countries in Europe, it sometimes ascended to the height of mountains—if in its general course it prevailed principally in warm weather, there were now and then exceptions, where it prevailed in cold weather. If it in most instances left the cities of Europe in six or eight weeks, as an epidemic, it was sometimes found to linger longer. If it was found in some places extremely fatal, in others it was comparatively a very mild disease—if in some very rare instances, it made its appearance as an epidemic, clothed with all its horrors; in a very great majority, it made its inroads gradually and mildly, appearing in the form of dysentery, cholero-dysentery, or cholerine—if in some individuals the disease appeared suddenly in its most malignant aspect, in most persons it lingered on mildly, and, after a little continuance, it would return again and again. Hence it was, that very many patients were either beguiled into danger, or needlessly alarmed from time to time. If its greater prevalence and greater malignancy, were obviously traced in many instances to unclean places, to persons of vicious habits in such neighborhoods, in other instances, it seemed to bid defiance to all prudence, and showed no respect for location! nor persons! nor habits!

There has been a good deal of disputation whether this be a new disease, or merely a greater prevalence of cholera morbus, &c. I am inclined to believe, however, that but few who have witnessed the course of this insidious disease, will contend for such an opinion. For myself, I was fully convinced from the first fatal case which I saw, that cholera was a disease which had never come under my notice, in a practice of more than 30 years. I was perhaps, the better prepared to decide this point, for having frequently seen sporadic cases of cholera morbus, and also an epidemic of this kind, in the year 1806, of which I took the precaution of keeping notes, which have been reviewed and found eminently useful.

The disease of the present year, as far as my experience and reading enabled me to judge, has never appeared in this country before; and, I have already said that although there is reason for supposing that it has long since visited some parts of Europe, still such was the imperfection of medical science, at those times, that nothing positive can be ascertained—this, at first sight may

seem to be a question of but little importance, but it involves matter of great moment, since we must feel a deep interest in knowing whether the disease is likely to continue among us, in this and other countries. The Almighty, in his mysterious providence, may direct the pestilence as to him shall seem proper; but reasoning upon the subject philosophically, we may remark that there is too much reason to fear, that the state of the atmosphere which has given rise to the disease, will continue, in greater or less force, for a series of years. I am led to this conclusion from the fact, that epidemic cholera has prevailed in some parts of India, for a long course of years; sometimes annually, or rather continually; and, sometimes at intervals of considerable length of time. Sometimes it has been epidemic; sometimes endemic; but it has more especially attracted attention in the East, since the year 1817. Its history in India, where it may, with some degree of propriety, be considered as indigenous, has been attended with circumstances no less irregular and protean, than is the disease in the features of its constitution—it is now here, now there; sometimes in one town, sometimes in another; sometimes in one army or encampment, sometimes in another; often these are separated by a very short distance, sometimes on the opposite sides of a narrow stream of water. We need not dwell, however, on the character of the disease abroad, there are too many circumstances connected with the disease as seen at home, to require our going abroad for information, except, so far as by its longer continuance, its more external characteristics may be better understood.

Another trait in the character of epidemic diseases, that has been well established since the days of doctor Sydenham, to whom it was well known, is the fact, that diseases are influenced by certain constitutions of years; and, even parts of years. The sagacious author just named has treated of disease under that aspect, and he tells us of different constitutions of years, in which it was obvious that some hidden poison, in the air, predisposed to this or that form of disease, and always with some degree of regularity, at least so far as that all great epidemics were found to extend their influence over diseases entirely different in their nature; and that most diseases, even those that were in some degree accidental, partook in some measure of the prevailing epidemic. In our own time it may be recollected that the United States had been so long exempt from yellow fever, that, people were panic struck when it appeared in Philadelphia in 1793; and it was only by a sort of good luck that doctor Rush was reminded of a pamphlet containing an account of a similar disease, which had prevailed in Virginia, about the year 1740, that any true pathological, or

therapeutic, light was obtained on the subject. But the usual bilious constitution of the air of Philadelphia, so common in this country, having changed to one which gave rise to yellow fever; this disease was afterwards found to continue more or less, at least up to 1798. In our own city the yellow fever after having appalled the strongest hearts, by the havoc it made, suddenly disappeared, and left not a vestige of itself behind; nor did it occur again, at least not as an epidemic; and, I have good reason for believing that it did not exist at all for fifteen years; when, in 1819, it again made its appearance, clothed with terror and destruction. It now continued to exist till the year 1822; since when, to the best of my recollection, it has not been seen, except, perhaps, a solitary case here and there.

The fact going to prove that epidemics do appear, and disappear, for certain indefinate periods, is too well known to require any thing more than this passing notice. Such being the law which governs epidemic diseases, it is to be feared, that we may have the present constitution of the atmosphere, continuing in greater or less force for some years. And, it may be profitable for us to be aware of the fact, in order that we may be prepared to meet this insidious disease in its forming state. I say insidious disease, because it passes along affecting hundreds but slightly, while it now and then, without our being aware of the cause, exerts a deadly influence; and with resistless force hurries its victims to the grave.

The prevalence of the disease in Canada, and afterwards in New York, and other cities and places, is too familiarly remembered to require any repetition of the sad tales reported of its ravages throughout the country. I have thought my time would be most profitably employed by relating some of the more important circumstances connected with the disease as seen at home; and, especially with reference to preventives and remedies. We shall now proceed to state some of the more useful facts or circumstances, without, however, entering into any notice of the treatment, in the professional sense of the word.

I have been led to believe, that one of the most important circumstances connected with cholera is, that of its being much diversified in its nature. Thus, in most places where this disease has prevailed, as an epidemic, it has been preceded by intestinal disease of a milder character. These have often existed for weeks, and months, before the disease assumed a malignant form; and, yet, these were not only the forerunners, but the disease itself. I saw distinct traces of this disease in the person of a young gentleman, in this city, as early as February last; a circumstance which was communicated to the board of health, and a few other friends at the time—In the month of May the

disease could be distinctly recognized, in the form of cholerine, and cholero-dysentery—from that time it gradually extended, but did not assume any thing of its malignant aspect till some time in July; which was after the disease was known to have prevailed for some time in New York, and also for a short period in Philadelphia. While physicians were treating diseases as cases of common cholera morbus, dysentery, diarrhea, &c., too often they and their patients were taken by surprise, and death, or great danger was the consequence. I am therefore of the opinion, that one of the most important truths connected with the disease in question is, that of viewing it in times of its epidemic prevalence, at home, or near us, as being all one disease, but assuming many degrees of strength or force. Let it not be said that this is calculated to excite unnecessary fear, and lead to too much physic taking—we do not by any means advise a thoughtless, or frequent, use of medicine, except there be a clear necessity for it; this view of the matter should lead to greater caution, in the observance of a proper regimen; and, moreover, it may be remarked that if there be so many mild cases, and but very few malignant ones, nothing could serve, in greater degree, to allay our apprehensions, of danger, than such a fact. I feel much satisfaction in the thought, that I was usefully employed, throughout the past season, in endeavoring to inculcate this opinion, which I had formed after the most careful examination, of such information as I could collect on the subject.

Another important fact to be remembered is, that this is not a disease of a day, a week, or perhaps, even a month, but of a season. The disease appears to be the result of a weak poison, which operates slowly, and often almost imperceptibly—Its tendency is to reduce the energies of our digestive organs, and thus, by disqualifying the stomach for certain kinds of food, tends constantly to gain an accession of strength. I do not see how this opinion can be called in question after what we have seen, of the almost universal impairment of the stomach—scarcely a person can be found that was not occasionally made mindful of the fact, that to eat freely of any kind of food whatever, would often lead to flatulence and oppression of various kinds and degrees. Thousands were thus admonished to be careful; but too often the friendly admonition was wholly disregarded, till, at some unlucky moment, articles were eaten, that were improper in themselves in the then condition of the stomach, or too much of gross or nutricious food, when, instantly the monitor that had given the friendly notice, as if provoked at the reckless goading on of the stomach, turned to the enemy; and soon added to the devastation made by the hidden foe. Hundreds came under my

notice, during the season, who were thus admonished; the greater number of people obeyed their guardian sentinel, others did it partially; and, I can truly aver, that of those who observed any reasonable degree of restraint upon their appetites, either escaped altogether, or had the disease mildly, with a single exception. I must acknowledge, that, I met with some who made but little change in their diet, and yet they escaped; but I met, and heard, from the most respectable sources, of many more, who after bidding defiance, and boasting that they could do this and that with impunity, were suddenly overtaken, and in many cases hurried to their graves, in the course of a few hours. It is then an established fact, that the poison which gives rise to cholera impairs the digestive function, and renders it unsafe, to say the least, to eat most of the vegetables of our gardens, and most of our fruits. There is scarcely a vegetable or a fruit in common use, that did not one time or another greatly disorder the stomach of persons of my acquaintance, and in very many instances, the use of them led to the disease.

In addition to the almost universal impairment of the stomach, to which we have alluded, we may notice the fact of hundreds during the season, who complained of crampy feelings in different parts of their bodies—oftener in the calves of the legs, sometimes in the feet, hands, arms, neck, and other parts; obviously showing, in these slight and walking cases, that the human body was under the influence of some deleterious agent, which operated generally. Pains, resembling rheumatic pains, were equally common in the wrists, neck, elbows, feet, knees, &c.

For my own part, I do not see how any unprejudiced observer can for one moment doubt the certainty of their being an atmospherical poison, which produced every form of the late disease, both in the form of the walking cases, to which we have just alluded, and in those wearing more distinct marks of cholera, or cholerine.

If then we find a cause which operates in a vast majority of cases, so as to present not the most remote appearance of giving rise to contagion, or as being the product of it, how can we admit, on the common rules of reasoning, the belief, that cholera is contagious. I cannot stop here however to discuss the subject of contagion, I would merely remark, on this point, that it is unphilosophical to admit more causes than one for the production of one effect. The disease if contagious, should be so unconditionally. If we admit the poison to be afloat in the air, and the product of some gaseous impregnation, arising from some part or parts of the earth, how can we admit that the same poison is prepared by a diseased operation of the human body?

UNIVERSITY OF MICHIG

We may be asked whence comes this atmospherical poison—we answer, that, as yet, chemistry has not been able satisfactorily to discover what may be the precise nature of it. But since we have satisfactory evidence of its non-migratory nature, and find it moving backwards and forwards, in its course through the country, and often moving in a direction contrary to the prevailing winds, it may be admitted to be an emanation from the bowels or surface of the earth.

I am well aware that all I have said or could say on this momentous subject must appear, in good degree, trite; since we have had so many reiterated accounts of the history, the nature of, and treatment of the disease.

I have thought however, that, a few words at the opening of our college, where we may expect to meet young gentlemen from the country, may be useful by way of precaution. In conclusion then, I am of the opinion that cholera has ceased to prevail as an epidemic in our city; but that the human body having been deeply impressed with the remote cause, there is still some degree of liability to the disease; and, that liability will be in proportion as we observe with more or less care, the necessary restrictions in diet. These restrictions should extend as well to very moderate eating, as to the avoidance of nearly all the usual vegetables and fruits of our tables. With due attention to those precautions, there is very little to fear from cholera, but I think it highly probable that our digestive organs will not recover their wonted vigor, till towards the close of the present year, when we may expect a greater change of season. It must not be supposed, I think, that those who have just come from the country have not been exposed; there is too much reason to fear that, the people of every section of our country have been in some degree under the epidemic influence.

It is a singular fact that notwithstanding the protean nature of cholera, in so great a degree that, in its more external associated circumstances, it is, as we have already said, uniformly variable! still I can with truth aver, that, in each individual case, I could prognosticate with more certainty than in any disease that is known to be a frequent outlet to human life. Hence it is that, I can declare with truth, and a high degree of satisfaction, that I never attended any disease of the least notoriety with so much certainty of conviction, that what I was doing was right.

Throughout the season I can truly declare, I never lost but one patient, whom I had the least hope of saving when called in. It is true that in four or five instances, I was called to witness the last agonies of those who had made me their choice,

but in these cases death was too clearly marked in their features, to doubt for one moment of their approaching ruin. I trust I may not be charged with vanity or egotism, in being thus particular, since it is not to laud my own praises; but I feel it a duty thus publicly to declare my opinion, in favor of a particular plan of treatment, which certainly was marked with results calculated to give it importance, and to render it worthy of imitation. I do not mean to go into any particulars at this time, I deem it sufficient to mention that, it was strictly antiphlogistic.

Influenced by reports from abroad, every plan of practice, which seemed to be founded in reason, was tried during the first few days after opening our hospitals. The inefficiency of many of these, together with the pathological views which I was compelled to adopt, after making some dissections, led me to adopt a simple, mild, antiphlogistic treatment—It was soon found that we were successful in proportion as our practice was milder, and more simplified. Stimulants and tonics were wholly discarded: and while the result of the practice of my young friends who had the more immediate charge of the sick at the hospitals, under my direction, was in the highest degree satisfactory to themselves, and to the board of health, not a cent was expended for brandy, wine, or other spirituous drinks—nor did we use camphor, ether, peppermint, ammonia, &c.

Lastly, I should feel as though I had done my friends injustice, if I did not thus publicly express the high estimate which I put upon the praiseworthy exertions of my young friends who had the medical charge of our hospitals; and also express my fullest approbation of the conduct of our ward physicians, and a large portion of the faculty who devoted their zealous efforts in the humane work.

UNIVERSITY OF MICHIGAN

Report of Cases treated in Cholera Hospital No. 3, from August 22d. to October 29th. 1832. By AUGUSTUS L. WARNER, M.D.

[The Report of Doctor Warner did not reach us in time to place it with those from Hospitals No. 1. and 2. This can in no respect lessen the value of the paper: but since it appears in our Journal disjoined from the other Hospital documents, we have thought proper thus briefly to explain the cause of the separation of the documents which it might be expected would appear conjoined.—ED.]

To Messrs. THOMAS S. SHEPPARD, PETER FOY, JACOB DEEMS, } Board of Health for Baltimore City.

GENTLEMEN,

The steady and progressive march of the dire scourge which struck terror into the bosoms of the unsuspecting and passive inhabitants of Jessore, bearing in its path despair and death—travelling with unmitigated violence over the whole habited world—pursuing so eccentric and devious a path, as to baffle all accuracy of calculation as to the moment of its attack, and the durance of its visit; has suggested to all prudent legislators the propriety of establishing and pursuing a protective, if not a proplylactive system of police.

Under this view, and with a judicious regard to the public health, you have caused to be erected in convenient situations, Hospitals for the reception of the indigent who may be afflicted with the prevailing epidemic. The charge of one of these (Hospital No. 3.) you have confided to me, and at the subsidence of this baleful malady and the closing of this Hospital, I feel called upon to set before you a faithful exposè of the nature of the disease, which has been submitted to my care, with the treatment pursued, and its ultimate success.

The great mass of medical historians concede the origin of this pestilence to the low country near the outlet of the Ganges, in Bengal; and attract particular attention to Jessore as the first populous town in which it made its appearance. Attention was directed to it in August, 1817, from which time it moved onward regardless of temperature, climate, season, sex, age, or condition; ravaging with alike malignity the highest, lowest, hottest, coldest, dryest, and most moist situations.

Claiming Asia as its natal spot, and from its resemblance in some of its symptoms to the ordinary Cholera of warm climates, it has been termed Asiatic Cholera.—Spasmodic Cholera, from one of the symptoms generally attendant.—Cholera Asphyxia, from a stage in its progression.

The primary cause of the disease remains as yet concealed from human scrutiny, and all investigations directed to this end have proved fruitless and unsatisfactory.

That the condition of Jessore in 1817 was not the same as Europe or America at that time, but by an unaccountable cause displayed within its borders an entirely new and hitherto unknown disease, is an indisputable fact. Whether this cause was an alteration in the electrical condition, or a deficiency of oxygen in the atmosphere, or some miasmatic effluvium from the human body under peculiar circumstances, is beyond my power to discern; yet it is certain that Jessore did generate within its borders, or in other words, first gave a habitation to the most desolating scourge of modern times. By a gradual, but uniform progression it has with a despoiling hand passed over the fairest portions of the globe, planting despair and grief amid the once peaceful and joyous abodes of men.

Admitting the origin of the disease to have been in Jessore, a question of great interest immediately arises; by what mode of propagation did it proceed in its onward course? Was it by communication with Jessore, or did the prevailing winds bear the poison to the surrounding country?

That communication with Jessore did not participate in the propagation of the disease, is inferred from the fact that it was established in the distant provinces of Behar and Dacca nearly at the same time, or within a few days after its appearance at Jessore; not allowing sufficient time for interchange of merchandize or personal communication.

The observation that one case is usually succeeded by others in the same family, instead of establishing the contagious character of the disease, only sustains a conclusion long since arrived at: irregularity of diet and neglect of cleanliness, ill ventilated apartments, anxiety and all the depressing passions, by debilitating the body, predisposed the system to the operation of the general and widely diffused cause. If the disease is essentially contagious, inoculation must be accomplished by the introduction of some of the fluids or secretions from the body into the circulation, or by applying them to the debrate ramillæ of the sentient nerves, distributed upon the mucous surfaces.

The most conclusive testimony is now afforded, to sustain the entire inertness of the fluids escaping from a cholera patient, by the fact that injuries oftentimes received, in post mortem examinations, have not in any instance given rise to disease; nor would they be presumed noxious, while it is admitted by the best authorities that the rice water evacuations from the bowels and stomach, as well as the copious transudation from the skin, are almost solely the unaltered serum of the blood.

UNIVERSITY OF MICHIGAN

The observation alluded to above, apparently sustaining the contagious nature of the disease, may be explained satisfactorily by the individuals of the same family enjoying a similar view of the disease, partake of the same food; pursue the same habits; occupy the same apartments; breathe the same atmosphere; frequent the same localities; are agitated and disturbed by the same anxieties, or overwhelmed by the same griefs—the communication of the disease in such a coterie, awakens the sympathies, dethrones the mind, and exposes the perturbed and agitated frame to the attack of a wide spread cause; acting uniformly upon the neighboring community.

The confirmation obtained by the contagionists from the display of disease in the attendants at Cholera Hospitals, is rendered extremely feeble when we consider the fatigue of body and anxiety of mind, which must necessarily attach to the duties of such vocation; associated with which is the depressing influence of foul air, arising from the number congregated together, and the constant excitement springing from the constant importunities of the unfortunate sufferers for relief; or the shrieks and groans of the dying. These circumstances acting as exciting causes, render the attendants upon such institutions peculiarly obnoxious to the operation of the general cause.

Nor will it be presumed that the poison, if such it be, is borne upon the breeze, and wafted from place to place; since it is a fact well attested, that its onward march has been regardless of weather, and in direct opposition to the prevailing winds. Whatever the predisposing agent may be;—by whatever influence generated, we are well aware, that for the time its operation is local, and confined to certain metes and bounds: active only for a given period, while its subsidence or disappearance from one location is but the annunciation of equally or more destructive ravages in another.

The progress of Cholera Epidemica may be divided into different stages or conditions;—the premonitory diarrhœa; the rice-water evacuations from the stomach and bowels; the cold, blue, collapsed or asphyxiate state; the typhoid fever.

The premonitory diarrhœa has been regarded with interest as the announcement of the approach of danger, and warns the individual of the invidious attack of the enemy. This mode of incursion is so general, as to be considered a permanent law; and the means of observation afforded me, present so few exceptions, that it appears just to consider diarrhœa a stage in the course of this disease.

The only morbid phenomenon at this period, is a looseness, and frequency in the evacuation of the bowels, attended with no pain or uneasiness. This stage teems with interest, as it is here

that a well directed effort will snatch the patient from impending danger, and avert a premature death. With the inhabitants of warm climates this disease is peculiarly destructive, because looseness of the bowels is a frequent occurrence, and under other circumstances regarded as a protective of health; by them this stage is oftentimes neglected, under an erroneous impression that it is the ordinary diarrhœa, of which they have frequent attacks, and attended in no instance by serious results. The duration of this stage varies from *six* hours to several days.

The appearance of rice-water discharges from the bowels and stomach, constitutes the second stage, and is strikingly characteristic of this disease: to the most sceptical, this morbid phenomenon should carry conviction. It is surprising to me that any one should obstinately persist in the opinion that, a disease presenting a totally new aspect in its symptomatology, is analogous to one of previous date: it is certainly a sad perversion of all the established principles of diagnosis. The fluid poured out from the bowels is generally transparent or translucent, suspending in it mucous flocculi; presenting the appearance of water in which rice had been boiled. By analysis, this fluid is found to consist of nearly the unaltered serum of the blood, and the ordinary secretion of the bowels commingled with it. Whether this discharge is a universal attendant of this disease, and in every instance preceding collapse, is yet a mooted question; but after strict inquiry in two hundred cases which fell under my observation in this city and Philadelphia, looseness of the bowels was an invariable attendant, and announced or attended collapse in every instance.

The discharges from the stomach were most frequently of a dark drab hue, and resembled gruel broth in colour and consistence. Vomiting and purging rice-water, and the above gruel-like fluid, constituted the prominent indications of the second stage; while the pulse, temperature, nervous and muscular system, presented morbid but variable states.

The pulse was either voluminous and sluggish—tense and frequent—small and quick, or feeble and tremulous. The temperature of the surface varied from coldness to great heat. The tongue and breath presented the same variations in temperature. The muscular system ranged from tranquillity to the most violent spasmodic contractions.

The nervous system was either inactive or depressed—natural—irritable, or highly agitated.

The change in the countenance strictly diagnostic of the collapsed state, begins to manifest itself soon after the second stage is fully established. The disease progressing, the third, cold—blue—collapsed or asphyxiate stage succeeds, and is distinguish-

UNIVERSITY OF MICHIGAN

ed by the following symptoms. The surface of the body with the exception of the abdominal region is cold—livid and corrugated—tongue blanched, cold and livid—breath cold—integuments upon the fingers and toes shrivelled—nails blue—eyes sunken with blue areolæ surrounding them—countenance shrunken and more pinched in—violent and spasmodic contraction of the muscles of the extremities—oppression of the præcordia—sense of faintness and constriction about the heart—copious transudation from the skin—rice-water discharges from the stomach and bowels frequent and profuse—pulse sluggish and soft, or feeble and tremulous, and at periods imperceptible—voice husky, sepulchral, and at intervals indistinct—secretion of urine totally suspended—great anxiety of mind and distressing jactation—complaints of insatiable thirst, and intolerable heat when the surface is icy cold, with great sensibility to external impressions.

They who rally from the cold most generally fall into the fourth or typhoid stage: this is essentially a muco-gastric and intestinal fever, involving the spinal marrow, brain and their meninges, and is characterized by a hot, dry skin—small, rapid circulation—vessels of the conjunctiva engorged—dry, brown tongue, with red edge,—brown or black sordes upon the teeth—low, muttering delirium, or profound lethargy—urine scanty and high coloured—bowels slow—pain produced by pressure upon the epigastrium and abdominal region—skin in many instances supersensitive.

As the disease was entirely novel in its character, it was not astonishing that so many different modes of treatment were adopted. Success in one or two cases of a disease so fatal in a large majority, seemed to warrant the most implicit confidence; in this way the attention of the medical profession was oftentimes directed from the unerring path which symptomatology so emphatically defines; and resort was had to the most inert and inefficient articles of the Materia Medica, or the most baneful and destructive nostrums.

Having honestly and faithfully tested the various modes of treatment recommended in this disease, I have no hesitation in stating the following as the result of my experience after frequent repetition. The indiscriminate use of the *lancet* is highly injurious, and in the vast majority of cases injudicious and unnecessary. The preparations of camphor I am disposed to consider inert and inutile. Calomel and opium decidedly prejudicial. The tinct. guaic. was freely used, and in no instance with benefit; while the most melancholy consequences attended its administration in several cases. I would direct your attention

particularly to this article, as it is the most prominent ingredient in a vile nostrum widely circulated through our city.

The treatment which I have found most suitable is arranged and adapted to the above division into four stages. It does not represent the treatment which was pursued in every case: for as I have stated above, almost every system which was suggested was fairly tested, and when found to be totally inefficient, I adopted the following, under which not one case was lost.

In the first stage, or premonitory diarrhœa, blood may be drawn, (but not I think invariably indicated.) ℞. Pulv. rhei. ℈. every three hours, until free catharsis. The bowels are left restrained and soothed; in this stage opium may be used, but in the second and third stages it is inexpedient.

The second stage in which the rice-water evacuations appear, does not admit of the use of the lancet, lest the detraction of blood may tend to increase the exhaustion already commenced by the copious discharges from the bowels. If the stomach is irritable and ejects its contents, the liberal use of pulv. ipecac. pressed to free emesis tranquillizes and enables it to retain any medicinal article. This point of the treatment is highly important as it enables the physician while he is preparing the stomach for the reception of his agents, to impress a new impulse upon the flagging circulation, and at the same time arrest the tormenting spasms. ℞. pulv. rhei. ʒss. followed up every half hour by a tablespoonful of the magnesia julep, prepared by the following formula, will generally arrest the evacuations, and establish convalescence. ℞. Carb. magnes. ʒj. aquæ. menth. ʒ ss. aquæ simpl. ʒ iv. m. ft. solut. Should great prostration succeed, or the bowels continne loosc, the following powder every two hours will complete the cure. ℞. Pulv. rhei. gr. vj. sulph. quinine. gr. iij. m. ft. pulv. It is an object of the first importance to sustain the patient with bland nutritious drinks, and the chicken-water, and warm gin toddy are admirably adapted to the case.

It has been said that the third or collapsed state is wholly incurable:—that the physician must stand by an inactive spectator of the ravages of disease; but I have strong reason to presume that experience and observation has shown that by the well directed efforts of the physician, the unrelenting tyrant may be hurled from his throne, and his victim snatched from an untimely and impending fate. The following treatment has not as yet failed in any one case in which it was adopted. ℞. Tinct. assafœtidæ ʒiij, followed by drachm doses every ½ hour, accompanied by the hourly exhibition of the following powder:—℞. Pulv. rhei gr. x., nit. potassæ gr. v., P. scillœ gr. ½. sulph. quinine gr. iij m. ft. pulv., assisted by the liberal use of warm

UNIVERSITY OF MICHIGAN

gin toddy and chicken water. Should the stomach be irritable and reject the above medicine, administer P. ipecacuan. ʒj, followed by free draughts of warm water: after the emetic has operated freely, renew the medicine. ℞. Emplast. vesicat. to abdomen.

The 4th stage presenting us gastric and intestinal irritation, yields readily to the subjoined treatment: ℞. Cups to abdomen, followed by empl. vesicat. ℞. Carb. magnes. ʒj., aquæ menth. ʒ ss, aquæ simplicis. ℥iv. m. ft. solut. table spoonful every hour. ℞. Pulv. rhei gr. v., nit. pot. gr. vj., sulph. quinine gr. iij m. ft. pulv. every 3 hours.

If the brain and spinal column is much involved, liberal cupping along the spine is indicated.

It will be found that by persevering in the use of the powder recommended in the cold or collapsed stage, the 4th or typhoid may very frequently be averted.

I cannot leave the treatment of this disease without denouncing liberal doses of calomel and other mercurial agents, now so lavishly administered in this disease, under a belief that no other agent can call forth the almost suspended action of the secernent vessels.

This view has evidently originated from the total absence of bile, which, in the opinion of many of our profession, indicates solely a torpor of the liver, and upon it is thrown the onus of the pathological state; but he must be a narrow observer who would omit to behold the complete subversion of the action of the kidneys—the skin and mucous membranes of the alimentary canal; for although large quantities of fluid escape from the bowels, stomach and skin, yet it is admitted to consist of the unaltered serum of the blood, having no analogy to the secretions furnished by the functional action of these organs.

The great liability to mercurial impression at this time, is a matter of common observation, and the slightest reflection would suggest the ill effects of mercurial ptyalism upon the nervous system already excited and irritated to its highest point. Independent of this, the depressing effects of large doses of calomel have oftentimes rendered hopeless the condition of him, whose constitution and mode of life proffered a strong assurance of speedy relief.

Nor is the article of opium less obnoxious to censure.—The irritable condition of the patient—the restlessness of body and mind—the exquisite sensibility to external impressions would indicate the free use of an anodyne, and no one could estimate its baneful effects but he, who has witnessed the apparently tranquil and placid sleep, sink into a lethargy which

progresses steadily to the quiet of death. So soon as the narcotic impression is produced in the collapsed or asphyxiate stage your patient is overwhelmed and destroyed.

In the tinct. assafœtidæ the physician will find an agent adequate to his wants; for while it stimulates gently, it allays the restlessness of the sufferer, and sooths him into a placid and refreshing sleep: while the cathartic, diuretic, diaphoretic and tonic influence of the powder above directed, sustains the cordial impression, and calls upon the dormant energies of the system, to arouse and protect the feeble efforts of nature.

The pathological state presented by many post-mortem examinations, authorizes the opinion that collapse consists in a congestion or arrest of the more solid constituents of the blood, in the capillary terminations, after the serum has been strained off.

In no instance had I been able to satisfy myself that inflammation existed in the state of collapse, in the gastric and intestinal mucous membranes to an extent sufficient to account for the attendant phenomena. The state immediately preceding this condition conflicts the idea of inflammation; for instead of an increased action in the arterial capillaries, we have them debilitated or in a measure paralyzed and permitting the escape of the fluid portion of the blood. That inflammation *may*, and sometimes does succeed the cold or collapsed state with those who rally, I am prepared to admit. We explain the process by which the state of collapse is brought about in the following manner:

The ganglionic system of nerves, (which overrules the process of nutrition and secretion, and sustains that vital connection which exists between the blood and the living organism,) is primarily assailed. The effect of this assault is an arrest of the functions of secretion, and a debilitated and paralyzed condition of the capillary vessels. The process of chylification is now suspended: the blood no longer receiving a supply of chyle, moving again and again in the round of circulation, eventually becomes unfit for the offices of life, and presents us the dark, carbonaceous hue:—independently of this, the arterial vessels which in health sustain an intimate relation to the blood, and maintain that vital connection which preserves the admixture of its different ingredients, together with the nerves endowing them, being impaired; the blood becomes disunited from the system and bears no more intimate connection to the vital organism than when abstracted from it.

Cut off from the system, removed from under the influence of the vital law, the same condition of things occurs, which present themselves when the blood is abstracted from the circulation.—The principal portion of the serum separates and escapes by the debilitated capillary extremities, while the red particles, fibrine

and the remaining portion of the serum is arrested in the extreme capillary terminations, presenting us the blue or livid hue of the surface.

An important inference from this pathology is, that the chance of recovery is always in ratio to the amount of serum extravasated, if a very large proportion of serum is thrown off, the hope of recovery is extremely feeble; and it is in those cases where the evacuations are frequent and very profuse that the patient speedily sinks into a moribund state.

The number admitted into Hospital No. 3, from August 22d to October 29, was ninety-four, of which number 86 were cases of cholera epidemica or maligna, 36 deaths occurred—one of gangrene of the arm, consequent to a severe injury of the hand, after he had rallied from cholera—one sent to the hospital under profuse ptyalism, and high delirium, died four hours after admission: reducing the number of deaths by cholera to *thirty-four*—thirteen of which had been treated by physicians, and when all hope was abandoned were brought to the hospital: six of the remaining twenty-one died within four hours after admission, and were in a dying condition when admitted, reducing the number of deaths which occurred after treatment in this hospital to fifteen.

When it is remembered that the character of the patients—their mode of life and shattered constitutions, rendered them very unfair subjects for treatment, it will be conceded that the mortality in this hospital has been comparatively small. A large portion of the deaths will be found by looking at the register, to have occurred during the three days in which the disease was so fatal in every part of our city, and seemed to baffle the most judiciously directed efforts.

It is an interesting fact that not one death occurred under the plan detailed above; for on those days on which the mortality was great, we set aside this system, and used a temporising plan, relying principally upon the vol. tinct. guiac, an article which I have stated before failed in every instance in my hands.

It will be observed by consulting the register, that venesection was performed in many instances, but the amount abstracted was small, and as far as I am able to judge, attended by no benefit whatever; on the contrary, where blood flowed freely, so as to affect the circulation, the patient if he was verging on collapse, would hasten into it.

In the fiscal operations of the hospital, both in the fitting up and after expenditures, a close regard was had to economy, for which purpose I discharged the warden and disbursed the money myself. By the list of expenditures presented to the secretary of your board, you will perceive that I have expended $415 51¼.

No individual was admitted except he was laboring under cholera, while the increased number in the last is made up, by the admission of children, whose parents were brought in a diseased state. All vagrants and ailments of a different character were refused admission into this Hospital, under a conviction that the public authorities had intended the appropriated money to be applied to the relief of Cholera cases alone.

Permit me to express my acknowledgments for the efficient assistance rendered me in the discharge of my duties by the individual members of your board; but particularly to the member having charge of this district; whose constant and unwearied exertions to alleviate the sufferings of the afflicted, should secure for him the regard and esteem of an intelligent and virtuous community.

Having passed through the desolating scourge, we are permitted to cast a retrospective glance upon the anxieties, the toils, the fatigues through which we have passed; and if any one circumstance is cheering in the retrospection, it is that during all our melancholy and gloomy labors, we ever found in those unwearied votaries of charity, firm and unyielding support.

The mildness characteristic of their sex; the patience and forbearance inculcated by their vocation; their stern and unrelenting attachment to duty, rendered them peculiarly suited to the wants of a Cholera Hospital.

But who can contemplate without admiring the heroism and benevolence displayed in sacrificing all the social joys to the public good?

Leaving the peaceful circle of domestic bliss, they have devoted themselves to the cause of humanity: promptly and cheerfully obeying the call of charity, they left the precincts of the cheerful day, to contribute their efforts to the alleviation of human misery and woe. Undismayed, they were always found formost in the rank of duty—unwearied by daily toils and nightly vigils, they ever appeared the faithful attendants by the bed of sickness; ministering to the wees and sorrows of the sufferer, or watching in the hour of dissolution, the last glimmer of life's expiring flame; soothing the dying hour and softening the passage to eternity, by directing the sufferer with the eye of faith to him, who could alone assuage the sorrows of his agitated bosom, and calm his departing spirit.

Permit me to direct the attention of our city authorities through your board, to the undecorated mound, which covers the mouldering remains of her whose life was sacrificed in the cause of humanity, in behalf of the poor of our city. The name of Sister Mary Francis, needs no comment or eulogium; her active exertions, her untimely end have wrested from the bosom of this com-

munity the deep and heart felt sigh—the choicest offering to departed worth.

Very respectfully, yours, &c.

AUG. L. WARNER, M. D.

Admissions into Cholera Hospital, No. 3, under the direction of Aug. L. Warner, M. D.

Nicholas Bacon, black, æt. 35, moribund, in profound collapse; drank a pint of whiskey, at 6 o'clock A. M.; no treatment instituted. Admitted Aug. 22d, at 1 P. M.—died Aug. 22d, at 20 minutes past 1 P. M.

Andrew Cart, white, æt. 28, cold tongue and extremities; pulse soft but full; cramps of fingers; choleric aspect. ℞. Venesect. ʒ xvj. ℞. pulv. rhei. ʒss. Next day. ℞. Sulp. quinine, gr. j. every hour. Admitted Aug. 22d—discharged Aug. 28th.

Yorick Shure, white, æt. 29, tongue cool; has had rice water evacuations the night previous; skin cold, with great transudation from the surface; sunken eye and dark areola; countenance choleric. ℞. g. camphor gr. jv. every two hours. ℞. Venesect. ʒ viij. ℞. Pulv. rhei. ʒss. Admitted Aug. 23d—discharged Aug. 26th.

Sarah Ann ———, black, æt. 7, diarrhea and vomiting for several days, and rice water evacuations for the last 12 hours; conjunctiva injected; pulse small and quick. ℞. Venesect. ʒiv. ℞. Sub. mur. hyd. gr. x. ℞. pulv. opii. gr. j. every 3 hours. Next day dry hot skin. ℞. Spts. nit. dul. ʒss. vin. ipecac. gt. xv. Admitted Aug. 23d—discharged Aug. 29th.

David Brown, black, æt. 63; rice water evacuations during the whole day; moribund; totally collapsed. ℞. Sinapisms to extremities. ℞. Sp. camphor ʒi. tinct. opii. ʒj. aquæ ammon. ʒss. moschi gr. xv. aquæ. ʒij. m. ft. solut.; tea spoonful every half hour. Admitted Aug. 23d, at 6 P. M.—died Aug. 23d, at half past 8 P. M.

Howard Edwards, white, æt. 45, extremely irritable temperament; diarrhea for several days; copper, livid hue of the whole surface; quick and soft pulse; tongue cold and purple; hands cold and shrivelled; feet moderate temperature; restlessness and great anxiety of mind; quick and laborious respiration; violent cramps of the leg and foot—has been treated by a physician before admission. 12 M. ℞. Sub. mur. hyd. gr. v. p. opii. gr. j. ℞. Spt. camphor ʒj. every 15 minutes. 5 P. M. ℞. Moschi, gr. x. ℞. spt. camphor ʒss. moschi gr. ij. every half hour; cups to abdomen. 7 P. M. moschi gr. v. ℞. Sulp. ether gut. xx. every half hour. Admitted Aug. 24th, at 12 M.—died Aug. 24th, at midnight.

George Washington, black, æt. 32, cold surface; fingers shrivelled; nails blue; choleric aspect; sunken eye; superior palpebræ hanging half over the globe; slight transudation from the surface; comatose, but answers intelligibly when spoken to; cold tongue and breath; restless; pulse just perceptible; no urine passed for 12 hours; has been eating apples and peaches. ℞. Sub. mur. hydrar. ʒj.; cups to abdomen. ℞. Tinct. opii. ʒj. spt. camphor gt. xv. sulp. ether gr. xv. m. ft. solut.; half every hour. 10 P. M. ℞. Spts. camphor ℥j. tinct. opii. ʒ iss. moschi gr. x. sulp. ether. ʒ iss. aquæ ℥ iij. m. ft. solut.; table spoonful every hour; sinapisms to legs and arms. Admitted Aug. 25, at 8 P. M—died. Aug. 26, at 2 A. M.

James Allen, black, æt. 21, cramps of the fingers and pectoralis major; pulse flagging; extremities cold; tongue and breath cold, and tip of nose considerably below the natural temperature. He had several relapses before he was discharged. ℞. Venesect. ℥ x. ℞. Spt. camphor. ʒ j. tinct. opii. gut. xv. sulp. ether xv. every hour. ℞. Sal. tartar ʒ j. every half hour until free catharsis. Admitted Aug. 25th, at 7 P. M.—discharged *Sept. 7th.*

George Howard, black, æt. 4½, pulse feeble and frequent; surface cold and bedewed with perspiration; tongue and breath cold; extremities cold; fingers corrugated; superior palpebræ hanging half over the globe of the eye; rice water evacuation during the night previous; no urine passed. ℞. Warm salt water emetic. ℞. musk emulsion. R. Sal. tartar ʒ ss. every half hour. Admitted Aug. 26, at 1 P. M.—died Aug. 26, at 5 P. M.

Maria A. Howard, black, æt. 16, rice water evacuations during the previous night; pulse full but soft; skin cold; tongue cold and dorsum covered with white fur; extremities cold and cramped. ℞. Spts. camphor ʒ j. ℞. Sal. tartar ʒ j. every half hour until free catharsis. Admitted Aug. 26th, at 1 P. M.—discharged Aug. 27th.

Mary Kirkland, white, æt. 38, diarrhea for 24 hours; cool tongue and breath; cold extremities; livid surface. ℞. Spts. camphor ʒ j. tinct. opii. gut. xv. ℞. Sal. tartar ʒ j. every two hours. Admitted Aug. 26th, at 6 P. M.—discharged Aug. 31st.

Mrs. H. Woods, white, æt. 47, pulse small and feeble; cold surface; tongue blanched and cold; sunken eye and shrunken features; excessive irritability of the stomach; great restlessness; rice evacuations frequent. ℞. Magnes. julep. ℞. Sal. tartar ℈j. every three hours. Admitted Aug. 27th—discharged Sept. 1st.

—— Woods, white, æt. 7 months, watery evacuations, premonitory to cholera. ℞. Pulv. dover gr. vj. pulv. rhei. gr. x. Admitted Aug. 27th—discharged Sept. 1st.

—— Woods, white, æt. 7 months, Mrs. Wood's twin to the above child, not sick. Admitted Aug. 27th—discharged Sept. 1st.

Catherine Bull, black, æt. 20. (Vide, post mortem list at the conclusion of this report.) Cold surface; fingers corrugated; nails blue; choleric aspect and sunken eye; superior palpebræ hanging half over the globe; slight transudation from the surface; comatose; restless; pulse just perceptible; seized with vomiting and purging two days previous. Has been treated by a physician, and when all hope was abandoned was sent to this hospital. ℞. Sub. mur. hyd. gr. x. every hour. ℞. Spts. camphor gut. xxv. sulp. ether ʒ ss. ℞. Cayenne pepper, infusion administered at intervals. Admitted Aug. 28th, at 12 M.—died Aug. 28th at 6 P. M.

Lender Harlusen, white, æt. 25, feeble pulse; cold surface, tongue, and breath; pain in the stomach; cramps of the extremities; diarrhea for several days, and rice water discharges when admitted. ℞. Venesect. ʒ iv. ℞. Sub. mur. hyd. gr. xv. pulv. opii. gr. j. m. ft. pulv. ℞. Spts. camphor gut. x. every half hour. ℞. Pulv. rhei. gr. xxv. Admitted Aug. 28th—discharged Aug. 30th.

Jno. Grant, black, æt. 12, pulse just perceptible; surface cold; tongue natural temperature; cramps of the legs and arms violent; torpor of the brain; voice hoarse, husky, and sepulchral; superior palpebræ hanging half over the globe of the eye. Has been treated by a physician, and when dying sent to this hospital. ℞. Sub. mur. hyd. g. x. every hour. ℞. Sulp. quinine gr. viij. p. opii gr. j. p. cayenne gr. iij. moschi gr. ij. m. ft. pulv. two hours; dry friction, and warm salt water bath. ℞. Tinct. opii. ʒ ss. Admitted Aug. 29th, at 1 P. M.—died Aug. 29th, at half past 4 P. M.

Jno. M'Bright, white, æt. 62, copper; livid hue of the whole surface; pulse just perceptible; hands and feet very much corrugated; violent cramps of legs and arms; cold tongue and breath; sunk eye with areola; pinched nose and choleric aspect; no urine since attack. ℞. Spts. camph. ʒ ss. sulp. ether ʒ ss.; place in warm salt water bath. ℞. Sal. tartar ʒ j. every hour. ℞. tinct. opii. ʒ i.; sunk into coma. Admitted Aug. 29th, at 5 P. M.—died Aug. 29th, at 10 P. M.

Nathan Scott, black, æt. 25, attacked with vomiting and purging at 2 o'clock last night; in confirmed asphyxia when admitted; livid hue of the surface; hands and feet corrugated and icy cold; eye sunk with blue areola, superior palpebræ hanging half over the globe; transudation from the surface; spasms of the muscles of extremities; pulse just perceptible. Has been treated by a physician and sent to this hospital in a dying state. ℞. Venesect. ℥v.; dry frictions. ℞. Pulv. rhei. gr. xv. pulv. opii. gr. j. p. cayenne gr. iij. moschi gr. ij. m. ft. pul. ℞. Sal. tartar ʒ iss. every hour. Aug. 31st, 12 M. has rallied slightly and seems somewhat improved. Admitted Aug. 30th, at 9 A. M.—died Aug. 31st, at 4 P. M. very suddenly and unexpectedly.

Maria Gibson, black, æt 25, pulse just perceptible; cold surface, tongue and breath; fingers corrugated; sunken eye, and dark areola surrounding it; retracted countenance; rice-water evacuations for twenty-four hours. Has been attended by two physicians, and far advanced in collapse when sent to this hospital. ℞. Sulp. quinine gr. v. p. opii. gr. ½. moschi gr. j. camphor gr. iv. m. ft. pulv. every half hour. ℞. Sal. tartar, every half hour until catharsis. ℞. Warm salt water enemata. Admitted Aug. 30th, at 10 A. M.—Died Aug. 30th, at 2 A. M.

Jas. Hughes, white, æt. 25, asphyxiate; pulse not perceptible at the wrist; cold surface; copper, livid hue of the skin; superior palpebra hanging half over the globe of the eye: eye sunk and blue areola surrounding it; cold tongue and breath; cramps of legs and arms; hands and feet corrugated; no urine since attacked. ℞. Carb. mag. ℥j. aquæ ment. ℥ ss. aquæ simplicis ℥ jjj. m. ft. solu. table-spoonful every hour; refuses to take any medicine, and is sinking rapidly. Admitted Sept. 1st. at 2 A. M.—Died Sept. 1st. at 4 P. M.

Martha Wilson, black, æt. 17, cold surface, tongue and breath; pulse just perceptible; cramps of legs and arms; eye sunk; with blue areola; superior palpebra pendulous; great restlessness; no urine since attacked; has been treated by a physician, and sent in perfectly collapsed. ℞. Carb. magnes. ℥s. tinct. opii. ℥ ss. aquæ menth. ℥ss. m. ft. solut. and administered as one dose. ℞. Carb. mag. ℥j. tinct opii. gut. x. aquæ menth. ℥ss. aquæ junip. ℥ jjj. m. ft. solut. table-spoonful every half hour. Admitted Sept. 1st. at 6 A. M.—Died Sept. 1st. at 5 P. M.

Moses Jennings, black, æt. 35, has rallied from the cold stage to the following symptoms;—skin hot, dry; pulse quick and rapid; tongue red and dry; coma, great emaciation and, prostration of the vital powers; has been treated by a physician. ℞. Sulph. quinine, gr. iij. sup. carb. pot. gr. vj. comphor gr. iij. m. ft. pulv. one every half hour. ℞. Carb. magnes. julep. Admitted Sept. 4th, at 3 P. M. died Sept. 5th, at 10 A. M.

James Brooks, black, 48, symptoms consequent to several days diarrhœa, were cold surface, tongue and breast; pulse just perceptible; sunken eye and dark areola; rice-water evacuations since morning; spasm in the legs and arms; palpebræ pendulous; transudation from the surface; no urine for 24 hours. ℞. venesect. ℥ viij. ℞. Carb. magnes. ℥iss. tinct. opii. ℥ss. aquæ menth ℥ ss. aquæ simplicis, ℥ ij. m. ft. solut. table-spoonful every half hour. ℞. Sulp. quinine gr. iij. nit. pot. gr. v. pulv. rhei. gr. x. m. ft. pulv. one every two hours. ℞. Empl. vesicat. to abdomen, and nape of neck. Admitted Sept. 4.–Discharged Sept. 10th.

Charlotte Foogood, black, æt. 29, attacked with vomiting and purging on the camp ground, seven miles in the country, and

brought to town in the following condition,--cold surface, tongue and breath; pulse just perceptible; eye sunk; retracted features; corrugated fingers and toes; violent cramps; comatose; no urine since attacked. ℞. Spt. nit. dul. ʒj. moschi gr. ij. aquæ. ʒj. ℞. Carb. mag. ʒ j. aquæ. menth. ʒ iij. brandy ʒ ss. aquæ simplicis. ʒ vj. m. ft. solut. table-spoonful every half hour. Hot mush poultice with mustard to abdomen; enemata of Lima bark in fusion, ʒ ij. every half hour; sinapisms to arms and legs. Admitted Sept. 5th, at 6 P. M.—Died Sept. 6th, at 10 A. M.

George Wolf, white, æt. 65, cold surface, tongue and breath; excessive spasms of the legs and arms; sunken eye, corrugated fingers and blue nails; coma nearly exhausted and greatly embarrassed by an old bronchial affection. General cordial treatment pursued. Admitted Sept. 5th, at 7 P. M.—Died Sept. 6th, at 10 A. M.

John Coxall, black, æt. 40, profound coma; cold surface; depressed pulse; moaning piteously; his wife states that he dined on sweet potatoes; no urine for several hours; cramps. ℞. Venesect. ʒ xviij. ℞. Pulv. Ipecac. ʒ iss. emetic brought up large lumps of potatoes. ℞. Molasses ʒ iss. mur. sod. ʒ ij. ol. ricini, ℥ij. aquæ fervidæ ℥xx. m. ft. enema. Admitted Sept. 5th, at 7 P. M.—Discharged Sept. 6th, at 10 A. M.

Jerry Campbell, black, æt. 32, cold surface; pulse just perceptible; eye sunk; vomiting and purging; cramps in legs and arms; cold tongue and breath; comatose; no urine for 12 hours. ℞. ol. ricini. tinct. rhei. aa. ʒ j. tinct. fœtid. ʒ ssj m. ft. solut. two teaspoonsful every half hour. ℞. Carb. magnes. ʒ j. aquæ menth. ʒ ss. aquæ juniper ℥iv. m.ft. solut. table-spoonful every half hour. Emplast. vesicat. to neck. Admitted Sept. 5th,—Discharged Sept. 12th.

David Ridout, black, æt. 30, cold surface, with copious transudation; pulse just perceptible; choleric countenance; eyes sunken, with dark areola; corrugated fingers and toes; nails dark; tongue livid, cold, and breath cold; rice-water evacuations for 24 hours; no urine passed for 24 hours. ℞. Ol. ricini. ʒ j. *tinct. fœtid.* ʒ ss. teaspoonful every half hour. ℞. Warm gin toddy, as a drink. ℞. Tinct. opii. ʒ j. acetat. plumb. ʒ iss. aquæ simplicis ℥v. ft. enema. ℞. Pulv, rhei. gr. vj. carb. mag. gr. v. sulp. quinine gr. iij. m. ft. pulv. every hour; epispastic to abdomen. Admitted Sept. 5th.—Discharged Sept. 12th.

Hester Wyman, white, æt. 60; attacked five days previous with cholera, is now rallying from the following symptoms; cold surface; corrugated fingers and toes; nails blue; transudation free; sunken eye; retracted features; pulse just perceptible; rice-water evacuations frequent. ℞. *Tinct. fœtid.* ʒ j. every 2 hours. ℞. P. rhei. gr. vj. p. doveri. gr. iv. sulp. quinine gr. iij. m. ft.

pulv. every 2 hours; ginger tea as a drink. Admitted Sept. 5th.—Discharged Sept. 8th.

Lewis Orrick, white, æt. 51, cold surface, blue; tongue livid, cold; breath cold; violent cramps; sunken eye; nose pinched in; no urine for 12 hours, transudation from the surface; fingers and toes corrugated; hand dreadfully injured by a dray running over it two days since. This case was perfectly rallied from cholera and died of tetanus (lock jaw) from the extensive injury of the hand. ℞. Tinct. rhei. ʒ j. every hour. ℞. *Tinct. fætid.* ʒj. every hour. ℞. Nit. pot. ʒ j. aquæ simplicis ʒ iv. m. ft. solut. tablespoonful every hour. Warm gin toddy. ℞. Pulv. ℈j. every three hours. Sept. 7, 8, A. M. completely rallied from cholera, but injury of the hand extensive and gangrenous. Admitted Sept. 6th. at 7 A. M.—Died Sept. 8th, at 12 A. M. tetanic spasms occurred, and in a few hours terminated his life.

Eliza Anderson, black, æt. 35, cold surface; excessive vomiting; small, soft, and slow pulse; fingers corrugated; nails, bluish, or rather a copperish hue; cramps of legs; rice water evacuations for 8 hours. ℞. *Tinct. fætid.* ʒ j. every hour: tinct. rhei. ʒ j. every half hour. ℞. Emplast vesicat. to abdomen. ℞. Sup. tart. pot. and jalap, to catharsis. Admitted Sept. 6th.—Discharged Sept. 15th.

Philip Latouridè, white, æt. 26, cold surface, livid; violent cramps; pulse scarcely perceptible; sunken eye and blue areola, cholera odour; superior palpebræ hanging over the glove; excessive restlessness. ℞. Nit. pot. ʒ j. spt. nit dul. ʒss. aquæ juniper. ʒ iv. m. ft. solut. tablespoonful every half hour. ℞. Pulv. rhei. ʒ ss. every two hours. ℞. Acet. plumb. ʒ ij. tinct. opii. ʒ iss. aquæ simpl. ʒiv. enema. Admitted Sept. 6th, at 6 P. M.—Died Sept. 7th, at 3 P. M.

Bernard Thompson, white, æt. 47, perfectly collapsed and moribund; comatose. No treatment. Admitted Sept. 7th, at 9 A. M.—Died Sept. 7th, at 10 A. M.

Michael Conway, white, æt. 23. collapsed and moribund; comatose; treated by a physician before he was sent to the hospital. No treatment could offer any hope of improvement. Admitted Sept. 7th.—Died Sept. 7th.

Martha Mills, black, æt. 30, collapsed, and apparently moribund; has been treated by a physician before sent to the hospital. ℞. Tinct. gent. comp. ʒ ij. tinct. rhei. ʒ iij. aquæ ammon. ʒ ij. aquæ simpl. ʒ vj. tablespoonful every hour. Admitted Sept. 7th.—Died Sept. 8th.

Adelaide Brown, black, æt. 12, the history of this case will be given in the words of the physician who saved her, and afterward sent her to this hospital. "Want of appetite for a week previous; taken about ten last night with vomiting and purging;

cramps; seen by me at 3 A. M. when she was found to have had rice-water discharges by the mouth and anus; great irritability of the stomach, rejecting every thing; extremities cold; cramps of the gastrocnemii; rice-water vomiting; profound collapse when admitted into this hospital. ℞. Nit. pot. gr. v. Sulp. quinine gr. iij. sup. carb. soda gr. iv. pulv. rhei. gr. x. m. ft. pulv. every two hours. Warm gin toddy,—drink. ℞. Sup. carb. soda ʒ j. aquæ simpl. ℥iv. m. ft. solut. tablespoonful every half hour to allay vomiting. ℞. Carb. magnes. ʒ j. aquæ menth. ʒ iij. aquæ simpl. ʒ iv. tablespoonful every hour. Admitted Sept. 7th.—Discharged Sept. 12th.

Patrick Welsh, white, æt. 32, pulse indistinct; delirium; tremor; rallied from cholera: is now *perfectly salivated* and raving mad; *has been treated by a physician.* ℞. Tinct opii. ʒ j. cordial diet; Sept. 8th, 1 A. M. comatose, dying. Admitted Sept. 7th, at 6 P. M.—Died Sept. 8th, at 9 P. M.

Frederick Barmer, white, æt. 12, in collapse, from a ship lying at quarantine. ℞. Venesect. ℥ vj. warm gin toddy as a drink. ℞. Pulv. rhei. ℈j. emplast vesicat; to abdomen. Sept. 8th, is now rallied and doing well, at 12 A. M. ℞. Tinct. guiac. ʒ j. produced the most distressing vomiting, under which he sunk. Admitted Sept. 7th, at 2 P. M.—Died Sept. 8th, at 2 P. M.

Joseph Conway, white; æt. 30, admitted in a state of ptyalism; highly excited condition of the nervous system; delirium; treated by a physician before sent to this hospital. ℞. Tinct. rhei. ʒ iss. pulv. rhei. ℈j. every three hours until catharsis; emplast. vesicat. back of neck; spontaneous and profuse hæmorrhage from the nose. ℞. Vol. tinct. guiac. ʒ j. every half hour. Admitted Sept. 7th, at 3 P. M.—Died Sept. 8th, at 10 P. M.

Hannah Sprye, black, æt. 30, perfectly collapsed. ℞. Vene sect. and cordial treatment; vol. tinct. guiac. ʒ j. every hour. Admitted Sept. 7th, at 8 P. M.—Died Sept. 8th, at 9 P. M.

Samuel De Valcourt, white, æt. 30, collapsed, with extreme irritability of the stomach. ℞. Aquæ menth. ʒ j, tinct. opii. ʒ ss. sp. camph. ʒ j, m. ft. steam bath by Jennings' apparatus. ℞. Tinct. guiac ʒ j every ½ hour—submur. hydr. gr. xv. every 2 hours. Admitted 8th Sept. Died 9th Sept.

Margaret Jois, black, æt. 35, cold surface, tongue and breath; pulse just perceptible; choleric countenance; rice water discharges by emesis and stool; violent cramps; is perfectly collapsed. ℞. *Tinct. fœtid* ʒ j every hour. ℞. Emplast. vesicat. to abdomen. ℞. Pulv. rhei. gr. vj, every hour. ℞. Nit. potas. ʒ j, spt. nit. dul. ℥ss, aquæ ℥iv, m. ft. solut. table spoonful every hour. Admitted 8th Sept. Discharged 17th Sept. This woman was considered dead three times during 9th Sept.

Wm. Rogers, white, æt. 41, perfectly collapsed; treated by a

physician before admission into the hospital. ℞. Tinct. guiac 3j, every hour. ℞. Pulv. rhei 9j, every 2 hours, until catharsis rallied from the cold stage, but was overwhelmed by the narcotic effects of a small anodyne. Admitted 8th Sept. Died 11th September.

John Huggins, white, æt. 25, perfectly collapsed; has been taking Houck's vile quackery. ℞. Cayenne infusion. ℞. Tinct. guiac 3j, every 2 hours. Admitted 9th Sept. Died 11th Sept.

Omey Troups, black, æt. 47, perfectly collapsed—moribund. No treatment. Admitted 10th Sept. 1 P. M. Died 10th Sept. 8½ P. M.

Emeline Spencer, black, æt. 26, diarrhea for several days; cold surface, tongue and breath; eyes slightly sunken; choleric countenance. ℞. Pulv. rhei gr. vj, pulv. doveri gr. vj. m. ft. pulv. every hour. ℞. Pulv. rhei gr. x, every 3 hours. Admitted 10th Sept. Discharged 15th Sept.

Tom Young, black, æt. 22, collapsed. Venesect. ℥viij.—℞. Sulph. quinine gr. iij, camphor gr. j, nit. potas. gr. v, pulv. scillæ gr. j, m. ft. pulv., one every hour. ℞. Emplast. vesicat. to abdomen. ℞. Vol. tinct. guiac 3j, every 2 hours. Admitted Sept. 10th. Died Sept. 14th.

Jane Brown, black, æt. 58, verging on collapse. ℞. Pulv. doveri gr. iij, pulv. rhei gr. vj, every 2 hours. ℞. Nit. potas. gr. iij, p. jalap gr. iv, sulph. quinine gr. ij, m. ft. pulv. every 2 hours. Admitted Sept. 11th. Discharged Sept. 23d.

Emmanuel ——, (male) black, æt. 40, 1st stage of disease.—℞. Pulv. rhei gr. lx. Admitted Sept. 11th. Discharged 13th September.

Jane Evans, white, æt. 40, 2nd stage of cholera. ℞. Carb. mag. 3iss, aqua menth. ℥ss, tinct. opii 3ss, aqua simp. ℥ ij.—℞. Pulv. rhei gr. vj, nit. potas. gr. iv, sulph. quinine gr. ij, every hour. Admitted Sept. 12th. Discharged Sept. 15th.

Ephraim Prigg, black, æt. 24, 2nd stage of cholera. ℞. Venesect. ℥ viij. ℞. Rhei gr. xx, sulph. tart. potas. gr. xxv.—℞. Pulv. rhei gr. viij, sulph. quinine gr. iij, nit. potas. gr. v, every 2 hours. Admitted 12th Sept. Discharged 15th Sept.

Patrick Ring, white, æt. 26, 2nd stage of cholera. ℞. Pulv. rhei ℥j. ℞. Carb. mag. 3ij, aquæ menth. 3 ij, aquæ font. ℥iij. Admitted Sept. 12th. Discharged 14th Sept.

Michael Brannon, white, æt. 38, collapsed (in 1st stage).—℞. Pulv. rhei 3 ss., every two hours. ℞. Carb. mag. 3 ij, aquæ menth. 3 ij, aquæ font. ℥ iv, table spoonful every hour. ℞. Sulp. quinine gr. xviij, nit. potas. 3 ss, m. ft. pulv. vj, one every hour; gn toddy Admitted 12th Sept. Discharged 16th Sept.

Thomas Dublin, black, æt. 48, 4th stage of typhoid fever—very much exhausted by disease, and suffering for 2 weeks from

want of nourishment. ℞. Pulv. rhei gr. vj, carb. mag. gr. v, sulph. quinine gr. iij, m. ft. pulv. every 2 hours; emplast. vesicat. to back of neck; cups to abdomen. Admitted 12th Sept. Died Sept. 17th.

Betsy Crommell, black, æt. 35, 2nd stage of cholera. ℞. P. rhei ʒ iss. ℞. Pulv. rhei gr. vj, nit. potas. gr. iv, sulph. quinine gr. iij, m. ft. pulv. every hour. Admitted 12th Sept. Discharged Sept. 19th.

Betsey Chambers, black, æt. 45, 2nd stage of cholera. ℞. Venesect. ℥ xij. ℞. Carb. mag. ʒ j, aquæ menth. ʒ j, aquæ font. ℥ij. ℞. Tonic quinine pulv. Admitted 12th Sept. Discharged Sept. 17th.

Mary Stephens, white, æt. 50, perfectly collapsed. Acet. morphii gr. ij, aquæ font. ℥ j, teaspoonful every ½ hour to allay vomiting. ℞. Vol. tinct. guiac, ʒ j, every 2 hours. Admitted 13th Sept. at 11 A. M. Died Sept. 14th, at 7 P. M.

—— Stephens, white, æt. 9, diarrhea. ℞. P. rhei gr. xij.—℞. Tinct. opii gut. x. Admitted 13th Sept. Discharged 15th September.

—— Stepens, white, æt. 7, diarrhea approaching rice water. ℞. P. rhei gr. x, pulv. doveri gr. iv. Admitted 13th Sept. Discharged 15th September.

—— Stephens, white, æt. 5, slight diarrhea. ℞. P. rhei gr. x. Admitted 13th Sept. Discharged 15th September.

Dorothea Sipple, white, æt. 45, rallying for the cold stage.—℞. Mild stimulant drinks and nutritious food. Admitted 13th Sept. Discharged 15th September.

—— Sipple, white, æt. 11, diarrhea. ℞. P. rhei gr. xv. Admitted 13th Sept. Discharged 15th September.

—— Sipple, white, æt. 7, diarrhea. ℞. P. rhei gr. vj, P. Doveri gr. vj. Admitted 13th Sept. Discharged Sept. 15th.

—— Sipple, white, æt. 5, diarrhea. ℞. Tinct. opii gut. iv, tinct. rhei ʒ ss. Admitted Sept. 13th. Discharged Sept. 15th.

Stephen Posey, black, æt. 58, verging on collapse. ℞. Venesect. ℥ xiv, which sunk him immediately in collapse. ℞. Acet. morphii gr. ij, aquæ font. ℥ j, m. ft. solut. tea spoonful every ½ hour, to allay vomiting. ℞. Acet. plumbi ʒ j, tinct. opii ʒ j, aquæ ℥ iij, m. ft. enema. Admitted Sept. 14th, at 3 P. M.—Died Sept. 15th, at 8 P. M.

Conrad Baugh, white, æt. 20, 2nd stage of cholera. ℞. Pulv. rhei ʒ j. ℞. Ol. ricini ℥ j, tinct. opii ʒ ss. Admitted Sept. 15th. Discharged Sept. 18th.

Charles Grant, black, æt. 28, 4th stage, or typhoid fever.—℞. Venesect. ℥ xiij. ℞. P. ipecac. ʒ j. ℞. Carb. mag. gr. v, p. rhei gr. vj, sulph. quinine gr. vij, nit. pot. gr. ij, m. ft. pulv.

every 2 hours; cups to the epigastrium, and blister to neck and abdomen. Admitted Sept. 15th. Discharged Oct. 3d.

Sarah Fergusson, black, æt. 40, third stage or collapse.—℞. Tinct. fœtid ʒ j every hour. ℞. P. rhei gr. vj, sulph. quin. gr. iij, nit. pot. gr. v, m. ft. pulv. every hour; warm gin toddy.—Admitted Sept. 16th. Discharged Sept. 25th.

Jane Harden, white, æt. 19, verging on collapse. P. ipecac. ʒ ij. ℞. Pulv. rhei ʒ j. ℞. Sulph. quinine gr. xviij, carb. mag. ʒ j, m. ft. pulv. vj, one every 2 hours. Admitted Sept. 16th.—Discharged Sept. 20th.

Frances Cook, black, æt. 25, perfectly collapsed; moribund. No treatment. Admitted Sept. 18th, 12 M. Died Sept. 18th, 1 P. M.

Maria Scott, white, æt. 27, second stage of cholera. ℞. Venesect. ℥xij. ℞. P. ipecac. ʒ iss. ℞. P. rhei ℈j, followed by sulph. quinine. Admitted Sept. 20th. Discharged Sept. 24th.

Jane Harden, white, æt. 19, verging on collapse, has been indulging freely since her discharge. ℞. Venesect. ℥ ij, p. ipecac. ʒ iss, tinct. fœtid ʒ j, every 2 hours. ℞. P. rhei gr. x, sulph. quinine gr. iij. Admitted Sept. 21st. Discharged Sept. 27th.

Catharine Hardesty, white, æt. 25, second stage of cholera.—℞. Venesect. ℥ x. ℞. P. ipecac ʒ iss, tinct. fœtid ʒ j every 2 hours. ℞. P. rhei gr. vj, sulph. quinine gr. iij, every 2 hours.—Admitted Sept. 21st. Discharged Sept. 29th.

Harrison Farry, white, æt. 17, verging on collapse. ℞. Tinct. fœtid. ʒ j every hour. ℞. Tinct. rhei ʒ j every ½ hour; warm gin toddy. Admitted Sept. 23d. Discharged Sept. 28th.

Enoch Adams, black, æt. 40, perfectly collapsed; moribund. Stimulants and sinapisms. Admitted Sept. 23d, at 4½ P. M.—Discharged Sept. 23d, at 7 P. M.

George Brooks, white, æt. 45, second stage of cholera. ℞. P. ipecac ʒ j. ℞. P. rhei ʒ j. Admitted Sept. 25. Discharged Sept. 27th.

Tom Jennings, black, æt. 27, first stage. ℞. P. ipecac ʒ j. ℞. P. rhei ʒ iss. Admitted Sept. 27. Discharged Sept. 30.

Michael Kean, white, æt. 39, verging on collapse. ℞. Tinct. fœtid ʒ j every hour. ℞. P. rhei gr. x, sulph. quinine gr. iij, nit. potas. gr. v, m. ft. pulv. every hour; warm gin toddy. Admitted Sept. 28th. Discharged Oct. 2d.

John Williams, white, æt. 20, first stage of collapse. ℞. Tinct. fœtid ʒ j every ½ hour. ℞. P. rhei gr. x, sulph quinino gr. iij, nit. potas. gr. v, every hour. Admitted Sept. 29th. Discharged Oct. 3d.

James Webster, black, æt. 37, perfectly collapsed. ℞. Tinct. fœtid ʒ iss, every ½ hour. ℞. P. rhei gr. xv, sulp. quinine gr. v,

nit. pot. gr. vj, p. scillæ gr. ij, m. ft. pulv. one every hour. Admitted Sept. 30th. Discharged Oct. 11th.

John Usher, black, æt. 27, second stage of cholera. ℞. P. rhei ʒ j, and tonic treatment. Admitted Oct. 2d. Discharged Oct. 10th.

Tom Brown, black, æt. 27, fourth stage or typhoid fever; very much exhausted. Cups to abdomen; catharsis and neutral alkaline draughts. Admitted Oct. 4th. Discharged Oct. 6th.

Robert Cooms, white, æt. 17, first stage of cholera. ℞. P. ipecac ʒ j. ℞. P. rhei ʒ j. Admitted Oct. 7th. Discharged Oct. 9th.

John Bayley, black, æt. 23, collapsed. ℞. Tinct. fœtid ʒ j, every hour. ℞. P. rhei gr. x, sulph. quinine gr. iij, nit. potas. gr. vj, every hour. Admitted Oct. 8th. Discharged Oct. 15th.

James Connor, white, æt. 35, verging on collapse. ℞. Tinct. fœtid. ʒ j every hour. ℞. P. rhei ℈j. ℞. P. rhei gr. v, sulph. quinine gr. iij, nit. potas. m. ft. pulv. every 2 hours. Admitted Oct. 15th. Discharged Oct. 19th.

Jane Harden, white, æt. 19, second stage, a third attack.—℞. P. ipecac. ʒ j. ℞. Tinct. rhei ʒ j, tinct. fœtid ʒ j, every 2 hours. Admitted Oct. 15th. Discharged Oct. 19th.

Hager Copeley, black, æt. 35, collapsed; sinking rapidly.—℞. Tinct. fœtid ʒ j every ½ hour. ℞. Pulv. rhei gr. vj, sulph. quinine gr. vj, every 2 hours. Admitted Oct. 16th. Discharged Oct. 23d.

Aquilla Sampson, black, æt. 23, collapsed. ℞. Tinct. fœtid ʒ j, every ½ hour. ℞. P. rhei gr. vj, p. nit. potas. gr. v, sulph. quinine gr. iij every hour. Admitted Oct. 16th. Discharged Oct. 29th.

John Sewell, black, æt. 49, second stage. ℞. P. rhei ʒ j, and tonic powder. Admitted Oct. 18th. Discharged Oct. 21st.

George Grimes, white, æt. 30, perfectly collapsed. ℞. Pulv. rhei ʒ j, tinct. fœtid ʒ j every 20 minutes. ℞. P. rhei gr. vj, sulph. quinine gr. iij, nit. potas. gr. vj, m. ft. pulv. every hour.—Admitted Oct. 25th. Discharged Oct. 28th.

James Trainer, white, æt. 40, moribund. ℞. Cordial treatment. Admitted Oct. 28th. Died Oct. 29th.

Sister Mary Frances. At 15 minutes before eleven A. M., I left the hospital for the purpose of recruiting myself from an attack of cholera the night previous: I left Sister Mary Francis at the bedside of a patient just admitted in a state of collapse—she complained of being weak, but upon strict examination by interrogation, she assured me that her bowels were as usual—not more relaxed than customary. I advised her, nay urged her to desist from duty and retire to her room. She persisted, and I

left the hospital at eleven. I was summoned to see her, and was at her bedside 15 minutes after her attack. She had fainted a few minutes after I left the hospital, and remained in a state of exhaustion when I saw her. The following symptoms attended: Whole surface livid; tongue livid and cold; breath cold; eyes sunken, with blue areolæ encircling them; fingers corrugated; nails blue; pulse just perceptible; no urine passed since the evening previous; transudation from the surface; complains of great nausea and oppression at the stomach; feels sensible that some food taken the day previous remains upon the stomach undigested. I sent for my friend doctor Thomas, and he arrived a few minutes after I entered the house. We pursued the following course: Eleven A. M.—℞. P. ipecac ʒ j, followed by warm water; free emesis excited, undigested meat, potatoes and bread: ejected. ℞. Warm brandy toddy. Half past 11 A. M.—pulse slightly improved: has had three rice water evacuations from the bowels during the last ½ hour; seized with cramps of the muscles of the legs; believes now for the first time that she has cholera. ℞. Magnesia julep. Nothing retained upon the stomach.—Twelve o'clock M. Doctor Baker called in—Vesication upon the abdomen by hot water: cuticle removed, and acet. morph. rubbed in. ℞. Cort. Lima ʒ ij, tinct. fœtid ʒ j, aquæ tepid. ℥iv, m. ft. enema. ℞. Acet. morph. gr. ij, aquæ simplicis ʒ j, m. ft. solut. tea spoonful every ½ hour. ℞. Ext. hyosiam. gr. j, pil. hydrag. gr. iv, m. ft. pil. every hour. Three P. M.—collapse becoming more profound. ℞. Vapor bath by Jennings' steam apparatus, produces excruciating torments and great restlessness. Four P. M.—Jactation distressing; sinking rapidly; intellectual faculties unimpaired. Six P. M—Sinking; pulse fluttering, tremulous, and at times indistinct; intellect clear; dying without a murmur. Quarter past 7 P. M.—Life's taper dies in its socket.—Seven P. M.—Dead. Attacked at 11 A. M. Died at 7 P. M.

Sister Mary James, complained of diarrhea, which she attributes to a peach eaten the day previous. Ate stewed peaches for dinner, a ripe peach, and drank freely of cream of tartar water. Attacked at 6 o'clock with vomiting and oppression at the stomach—at 7 o'clock attention was directed to her, with the following symptoms, nausea and vomiting; pulse small, feeble, and at intervals indistinct; surface cold, tongue and breath cool; cramps of the legs and arms. ℞. Venesect. ʒ viij. ℞. P. ipecac. ʒ j. free emesis excited, ejecting undigested food and the above mentioned articles. 9 P. M. complains of nausea and oppression at the stomach. ℞. Warm water to free emesis. ℞. Emplast. vesicat. to abdomen. Half past 9 P. M. calm but ge-

neral feebleness. ℞. P. rhei. ʒj. followed every hour by the magnes. julep. Discharged 2d October.

Admissions and Terminations.

Whole number of cases	94
Deaths	36
Cured,	58

When it is considered that the cases presented at a Cholera Hospital are of the most aggravated cast, the constitution shattered and the mind degraded, it is not wonderful that many who might otherwise be saved, fall victims to a pestilential disease.

The following extract from the American Journal of Medical Sciences, No. XX. page 389, shows the comparative result of treatment in Cholera, between this Hospital and that of the Hotel Dieu, La Pitiè, La Charitè, Neckar and Val. De Grace.

"Every variety of stimulant treatment was employed in vain, and those who witnessed the terrific aspect of the cholera at its first appearance, were not surprised to learn that of the first *one hundred* cases admitted into the 'Hotel Dieu,' *ninety-seven* of which were cholera, *ninety-six died*, leaving but one solitary case of the disease cured. Yet this was not from the treatment of a solitary physician, but the results of the practice of all of the physicians and surgeons, who divided the patients in the ward. This bad success was not peculiar to Hotel Dieu; at La Pitiè, La Charitè, Neckar, and even at the Val. de Grace, with healthy, robust soldiers, the results were about equally bad."

AUG. L. WARNER, M. D.

The following post mortem examination of case 14, illustrates the morbid phenomena presented in seventeen cases—some little variations, indicative of old disease, were occasionally detected, but did not appear to modify the present abnormal state.

Catherine Bull, colored, age 20.—Post mortem 3 hours—abdomen puffed up—the whole alimentary canal distented with flatus; the minute ramifications of the mesenteric veins distended with dark venous blood—mucous membrane of the jejunum, ileum and great intestine blanched, and containing a large portion of the rice-water fluid—mucous membrane of the duodenum softened in one spot, and considered from the appearance of the surrounding part, to be the result of an old intestinal affair—gastric mucous membrane blanched, with distinct congestion of the venous capillaries—stomach half filled with a dirty, blackish fluid, resembling the scrapings of the gutter. The hepatic and gastric

plexuses of the sympathetic nerve were exposed, together with the trunk of the splanchnic nerve and presented a very unusual blanched appearance, and at the same time so firm and hard as to resemble fiddle strings. The most delicate twigs required considerable force to rupture them. Lungs blanched. Heart substance soft, purple, and easily lacerated: the left ventricle filled with black grumous blood—the abdominal aorta, iliac, and all the large arteries half filled with the same—gall bladder half filled with healthy bile and ducts pervious—urinary bladder firmly contracted, and mucous surface dry—not a drop of urine in the pelvis of the kidney, ureter, or bladder: when the ureter was pressed upon a drop of yellow mucus was pressed out—brain of a livid cast, referred to venous congestion.

UNIVERSITY OF MICHIGAN

APPENDIX.

Wishing to present our hospital reports entire, we have reserved a few remarks, which we wished to offer upon some of the occurrences recorded, in an appendix. In pursuance of this plan, we proceed to exhibit such remarks as seem to us worthy of record.

(A.)

At page 284, of the present number, we have given a few of the particulars of an interesting case of cholera, noticed by doctor Carrere. This case is interesting on account of the circumstance that it was one of the first of real malignancy of aspect, and one which occurred at a time when the attention of the hospital physician was so much engaged, in completing his general arrangements, as to prevent his recording any thing more than a few of the more prominent facts.

We are told that this patient "was in articulo mortis when brought in—saline injections were used; after which the temporal artery was opened and about a pint of blood was obtained."

It will be recollected by the reader that about this time, or a little anterior, experiments had been made upon cholera patients, by injecting into their veins a solution of common salt, and that hopes were entertained at first, that this practice was likely to be attended with happy results. These experiments were made at New York and Norfolk. We can however truly aver, that our reading of the post mortem examinations, in the North of Europe, had led us to hope that the veins might be injected with some prospect of success. We have found, as well by our own examinations, as by the reports from many parts of this country, that coagulation of the blood was not so common here as in some parts of Europe, but this fact was not so well known until lately. This occurrence appears to have been unusually common at Berlin, in Prussia, according to the observations of doctor Diffenbach. The blood having been seen so constantly dark, and coagulation prevailing so much, led us to imagine that any agent which would have the effect of preventing coagulation, and at the same time preserve, or restore the proper fluidity and floridness of the blood, would be a useful remedy in the treatment of cholera. In reflecting upon this subject, we were reminded of a fact which we had witnessed when a boy, at the butcher's shambles, where we have seen them prepare the blood of the hog, for what are termed blood-puddings. This is done by catching the blood in a broad vessel, as it is pouring out from the arteries;

into the vessel there is first put a moderate quantity of fine salt; then beating the blood briskly while it is pouring into the pan, it remains quite florid, and becomes quite as red as arterial blood. In this process we find then that the salt has the effect of keeping up the natural color of arterial blood, and prevents the collection of fibrin, by preventing the decomposition of the blood. Every one is aware, perhaps, that by beating the blood of healthy animals, by means of a small rod, that the fibrin will collect into shreds, and attach itself to the rod. This process, we had reason to hope then, would enable us to prevent the separation of the constituents of the blood, and, perhaps, restore its properties where the changes had not progressed too far. Such were our reflections on this subject before we had read of any experiments, and we had spoken freely to a particular friend to this end, before cholera had appeared in Baltimore, in its malignant form.

The patient now before us was extremely ill; extremities "cold, voice husky; skin on the hands shrivelled;" there was extreme prostration; pulse scarcely perceptible; he was sensible when spoken to, but he was extremely dull, and seemed to suffer the agonies of malignant fever. Upon examining his arm, the cephalic vein could not easily be found, particularly in the colored skin, owing to the great diminution of the size of the vessel. It was discovered and laid bare a reasonable distance, and was now found not to exceed a small sized twine in size. There was some little difficulty in making the necessary puncture with a sharp lancet, for the admission of the injecting pipe—having made a proper opening, the pipe of the injecting apparatus was introduced into the vein, by first elevating the entire vein on the end of a small probe. Two drahms of common salt having been dissolved in about 14 ounces of water, this was injected slowly into the vein. In the course of a few minutes the patient became more animated; his pulse improved considerably; and the surface became in a slight degree warmer—in short, we were much pleased with the effect of the remedy. But it was soon seen that the improvement was not progressive, and we observed that the contracted state of the superficial veins continued. Believing then that the blood was not only darker than natural, and disposed to coagulate in the vessels, but that its quantity was much diminished, we resolved upon filling the veins with simple water, not deeming it proper to introduce so much saline matter. An effort was made to inject water, but it was soon found that it would not enter into the vessels, owing, as we suppose, to a want of affinity between the water and the diseased blood. Not succeeding in this, we resolved upon injecting another portion of the saline injection into the foot; accordingly a vein was opened on the top of the foot, and about 14 ounces of salt water inject-

ed. This was attended with a little further amendment, and the circulation being now somewhat improved, a vein was opened and a little blood obtained—a branch of the temporal artery was also opened, which bled more freely, and the blood was florid. We now think the bleeding was improper, but still we believe the case before us had arrived at an incurable stage. It will be recollected, however, that by many of those who had treated the disease, in different parts in Europe, and in some instances in this country, bloodletting was much insisted on; and, yet, the precise circumstances in which it was to be employed, had never been properly pointed out.

As has been stated by doctor Carrere, this patient died in a few hours without having furnished any thing decisive as to the advantage or disadvantage of bleeding, or the injection.

This operation having been performed once more, and attended with some interesting circumstances, we shall defer any further remarks, which we may have to make upon the subject of injecting the veins, until we come to notice the other case in which it was practised. But it seems proper that we give some account of our injecting apparatus, from the circumstances that it is more simple in its construction, and cheaper than any other; besides, it can be made by the rudest mechanic, and, while it is as effectual as any other apparatus, it can be used by any person of the least handiness, without being disabled.

It consists of a cylindrical body, about eight inches in length, and two and a half in diameter—this cylinder terminates in a funnel, having a small pipe; the whole made of common tin. To this pipe, which terminates in a knobular point, was tied a portion of cats intestine, about three feet in length; and to the other end of the intestine, was tied a small silver tube, terminating in a small point, intended for insertion into the vein. The pressure of a column of water depending upon its height, and not upon the quantity, it is obvious that a column of upwards of three feet will press with considerable force. We found afterwards that the pressure could be considerably augmented, by pressing the fluid from the tube by means of the thumb and forefinger. We are reminded here of the fact related by doctor Diffenbach, i. e. that the blood of healthy persons will not readily mix with that of cholera patients; and hence the difficulty, and, indeed, impossibility, of accomplishing transfusion with success—we have seen that the same difficulty attended our efforts to introduce warm water into the veins of the patient, whose case we have just noticed. So far as the blood is concerned, we are inclined to believe that the saline injection in a good degree, corrects the fault in the blood, but it is not sufficient that we merely improve the mass of blood present in the veins; but, we must

also change the morbid action of the capillary vessels; and, perhaps the nervous energies also must be corrected, and, hence, probably, we may derive the true explanation that the temporary improvement of the patients, in almost all cases, is owing to bettering the condition of the blood; but the sensorial organs, and the associated capillaries being diseased, the effect is but temporary, because the blood for want of a proper vital association with other parts; or, perhaps, because it is necessary that the blood shall be kept in a state of sanity, our patient soon fell back into a state rapidly tending towards death.

(B.)

We must refer our readers to page 306, of our present number, for doctor Carrere's report of a second case of injection of the veins. We shall quote so much of the doctor's report as relates to the injection. "In the afternoon the injection of nitras. pot. ʒ ij., and ℔j. of water, was introduced into the vein of the arm, which produced a slight reaction; pulse perceptible at the wrists for a while; pulsations of the heart about 130 in the minute—he complained during the operation of great pain in the shoulder and back: the pain of the back he had complained of during the whole day—he wished very much to have some wine, a small quantity was given him, which sat pretty well on the stomach; he stated that a short time after the operation was commenced, that he felt great heat about the heart; appeared as if he was going to faint, but rallied immediately, and stated that he thought that there was a Spaniard who struck him with a knife in the heart. The first evening that he was in the house he made the same remark." The patient died a few hours after the injection of the veins, but as the case was attended with some interesting particulars, and since the hospital physician, owing to a great pressure of business could not be as minute in his remarks as seemed desirable, we have thought proper to notice a few additional facts connected with this case.

The injection of salt having generally failed, we resolved upon trying some other agent, which resembled it in its properties, and which we believed to have the property of restoring the fluidity and floridness of the blood. For this purpose we dissolved one drachm of nitrat. pot. in ℔j. of warm water. The cephalic vein being prepared, the pipe of the injecting machine was introduced, but we soon found that the blood would not receive the fluid easily. Being foiled in our effort at injecting any of the fluid by the force of pressure obtained from the weight of the column of the water, we bethought ourselves of pressing the fluid through the small pipe of the instrument, by stroking down the tube between the thumb and forefinger—in this way we

found we could apply a considerable force, and we soon succeeded in passing about an ounce of the fluid into the vein—as it passed in, the patient cried out with an agony of pain—he continued to roar out at each injection. Upon questioning him, as to his feeling, he stated, that he had a most rending pain in his shoulder. He soon complained of its moving inwards, towards the heart, when all at once he started up as if suddenly alarmed. His face become slightly flushed—The surface which had been extremely cold all day, became warmer; his pulse stronger; his expression more animated; and, he expressed himself, as already related by doctor Carrere. He now proceeded clearly, and with considerable energy of expression, to inform us that he had suffered all day from cold feet, and a sinking feeling; whereas he was now warm, and felt a pleasant glow over his whole body; and that we had infused new animation into his system, for which he wished to give us a thousand thanks. This man though of common appearance, obviously possessed more than an ordinary amount of common sense. The propriety, and the energy with which he was now enabled to express himself, after laying all day exhausted below the power of articulating much above a whisper, was highly gratifying, as well from the impression made by a change so unexpected, as by the momentary hope which it excited, that the remedy might possibly be attended with success. We left this patient with an impression, that if his disease had been any other than cholera, we should have looked most confidently for a restoration after so very extraordinary a change in his condition, so far as we could judge from the symptoms present. But alas! this poor man's fate was sealed; this happy feeling which had prompted him to express his gratitude, &c., soon terminated; and in a few hours he was relieved from his earthly concerns.

Our experience so far, in relation to the injection of the veins, for the cure of cholera, leaves us nothing to expect from this practice, unless we can devise some other mode of employing it. Should it be deemed advisable to make further trial of this plan of treatment, there appear to be two points to which our attention should be principally directed. 1st. To find the proper injection, as well in regard to the articles to be used, as to the strength, temperature, &c. 2dly. To decide to what extent, as to quantity, we should carry the injection; and as to the repetitions which may or may not be requisite.

We shall not stop to speculate upon this matter, since we have no matters of fact to offer—it would seem reasonable however, to look to some preparations of fresh animal matter dissolved in water, as the proper material; and to come as near as may be to an imitation of the serum of the blood—as to the quan-

tity, the empty state of the vessels would seem to indicate, that the quantity of fluid should be considerable; but we must not overlook the fact that, the heart and arteries cannot accommodate themselves to more than reasonable changes of the quantity of the circulating fluid. The necessity which exists for a due distention of the vessels, is well known; and we know with equal certainty that, overdistention is hurtful; and, when carried too far, may no doubt prove fatal.

This view of the subject would seem to lead to the conclusion, that, there would be most hope from repetitions—A moderate quantity being injected, we may wait the effect; if the patient appears to be benefited, this would seem to indicate, that we have injected enough for the time; but it would seem to be proper, now to watch with the most scrupulous care, and *repeat* the moment that we find our patient falling off.

But, while we would express as our opinion, that the injection of the veins has not been sufficiently tested, we wish to express our apprehension that we can only correct the fault of the system present, so far as the blood is concerned—If the secerning vessels, and the nervous influence governing these secerning organs, are in a state of derangement, our efforts to relieve, will be transient. But as there is a mutual dependence between the blood, and the organs and powers above referred to, it may be, that improving the state of the blood may, in some degree, improve other parts. Besides, the secernents may be impaired to an extent which admits of their recovery, if the condition of the blood be improved; and, yet, so much diseased as to be unable to recover, under the opposing influence of the blood, which is now deficient in quantity, and defective in quality. We must not forget, in our reflections upon this subject, to bear in mind the fact, that injection of the veins has never been employed, we believe, except in the stage of collapse; and every one is aware of the slender hopes, in this stage of the disease from any treatment. We would not wish to be understood here that we recommond this remedy, at an earlier stage of cholera—such a procedure is objectionable under every view of the subject. The remedy so far, has not been attended with results at all favorable to our hopes in using it; and so many patients are affected with cholera, in whom there never is any direct tendency to collapse; that to use a doubtful or any other than a mild and well tried remedy, would be in the highest degree reprehensible; still, we may experiment in desperate cases.

(C.)

It may be observed that the disease, as it abated in its amount, also abated in its virulence—and, indeed, this seems to be a

UNIVERSITY OF MICHIGAN

regular characteristic of the disease, and has, no doubt, sometimes led physicians to imagine they had fallen upon a more successful plan of treatment. Thus it sometimes happens that, the disease appears in great violence, and many die; the physician, seeing no well marked advantage from his remedies, tries several in succession, each of which has perhaps been supposed to have been useful in the practice of others, presently he finds one to answer beyond his expectations; thus unexpectedly relieved from his difficulties, and, his mind relieved from the distress inseparable from the devastation which cholera makes at its acme of virulence, he suffers himself to imagine that all is ascribable to the new remedy, or at least in greater part; thus forgetting that nearly all is, in fact, ascribable to the ameliorated condition of the disease itself. In this way too it may sometimes happen, that, hospitals which are opened later in a cholera season, will exhibit a more favorable report of cases, than those that are opened earlier, when it is known that with almost no exceptions, cholera however long it may linger in the forms of cholerine, and cholero-dysentery, assumes its acme of virulence a few days after it assumes the malignant form.

We should have mentioned that we did not deem it important to carry out some of the last cases at hospital No. 2, since they did not present any thing novel or interesting; and enough had been shown to exhibit our practice, and being public cases, facts enough are afforded to substantiate our assertions and opinions, respecting epidemic cholera.

(D.)

We have already alluded to this case stated at page 344, of the present number; but as this was the first case which enabled us to conclude positively that cholera had assumed the malignant form in Baltimore, we think proper, to enter more fully into the particulars of the case, than has been done by my friend doctor Mackenzie, who at that time was too much engaged, in making his general arrangements in the hospital, to admit of his entering into minute details of cases.

We saw this patient about ¾ of an hour before his death—he was a frail old man, at 75 years of age. He had the contracted appearance of the face in greater degree than usual, which could readily be distinguished from the wrinkles of old age. We need not describe the symptoms; but we would remark that the old man retained his senses, till within a few moments of his death, and insisted much on being bled. We could not indulge the slightest hope of his recovery from any treatment; for although as yet, we had but a very slight acquaintance with cholera in its

malignant form, the fatal tendency of the case was too clearly portrayed, to leave any difficulty in forming a prognosis of it. Nevertheless we consented to bleed him, because we felt confident that under existing circumstances, it could not injure him; and we were anxious to try whether he would bleed, and to ascertain what were the appearances of the blood. A vein being opened pretty freely, we obtained but a mere trifle of blood, which was of a very dark color; indeed it appeared to be quite black—not succeeding in getting as much as would enable us to examine the blood, we opened a vein in the other arm, and by a good deal of rubbing, about two ounces of blood were obtained.—Finding that no more blood could be obtained, we now turned our attention to other remedies—doctor Mackenzie states that an enema, of salt and water, was administered—We also gave the patient a large tumblerful of warm salt water. We had previously resolved upon trying the use of the salt water in this way, as well as by injecting the veins, before we had heard of its adoption in Philadelphia. In this case neither the injection per rectum, nor the salt water taken by the mouth came away; all remained locked up, and in a few minutes after the exhibition of the salt water by the mouth, the countenance of the patient suddenly changed; his respiration became much more laborious; his eyes lost their lustre, and he refused to answer questions put to him—in short, we now plainly perceived that, he was dying—in a few minutes he was dead.

We remarked in this case that but little could be expected from the application of external dry heat, owing to the incessant and ungovernable disposition of the patient to toss about, so that nothing could be kept applied regularly, even while a nurse stood beside him, for the purpose of keeping the sand bags applied to his extremities. We afterwards ascertained, at an early period of the epidemic, that warmth could not be regularly applied to patients in this disease, and, we soon abandoned all attempts at applying heat, except to the feet, which was done by hot sand applied in bags to the feet. Indeed it did not appear to us that while a copious transudation was going on through the skin, that any heat could thus be imparted to the body; we, therefore, resolved upon endeavoring to retain all the heat which might be found remaining in the system, by applying long sleeves and leggins, of warm baize—So soon as the patient could be got to bed, his skin was wiped dry, and the woolen envelopes applied.

But to return to the case of Brown, we bled this patient ourselves—it so happened that a clean strip of muslin was handed us, to be used as a ligature in bleeding, this was stained with a few drops of blood. In about half an hour after the bleeding,

UNIVERSITY OF MICHIGAN

a little more or less, we remarked that the stain on the bandage was unusually bright; upon a closer examination we found an appearance of greater consistence in the blood forming the stain or as if the coloring fluid had more *body* than usually exists in blood; and instead of the edge of the stain terminating in a margin which became paler when it spread, as is usual, it terminated abruptly without the least appearance of any stain from serum. Looking at the blood in the bottom of a tin pan, it very much resembled a piece of metal which had been japanned black; it was highly polished, and looked as if the surface was covered with a pellicle, when closely examined; and in attempting to touch it with the finger, one could not divest themselves of the supposition that, the finger would meet resistance, but when the finger came in contact, the mass gave the sensation to the touch, of an oily fluid. In short, we decided that—in this case the blood was decomposed, and deprived of its serum, while the remaining mass was more closely amalgamated, and the color more intense than usual, whether we look to the blood in the pan, or the stain on the muslin. We were led to the conclusion, which we have not been enabled to change, that whatever might be the nature of cholera, and whatever might be said of recoveries from the state of collapse, whenever the blood of a patient takes on the condition which we have just described, they are irrecoverably gone—The blood being wholly unfit for the purposes of life, death is as certain as if the patient had received a bullet through the heart. It is very certain, however, that this condition of the blood does not always exist when the more visible symptoms of collapse are present. Our opinion of the matter is this: the danger which attends cholera grows principally out of a tendency to a certain kind of morbid debility, which we recognize by cold skin, clammy cold sweat, cold tongue and breath; spasms, dejections from the bowels, emesis, &c. &c.—associated with or arising out of this condition of the system, there is a tendency to decomposition of blood, and our observations lead us to believe, that when it takes place, it is always suddenly; and, always a fatal occurrence. Persons do sometimes appear to labor under all the symptoms of collapse, and after remaining more or less time in this state, from the period of a few hours to several days, they begin to improve; and this takes place now and then under every kind of treatment; in such cases we say, that, however much the case may resemble collapse, it is not collapse in fact, so long as the blood retains its integrity—While the blood remains in sufficient quantity, and its properties not too much impaired to render it unfit for sustaining life, the patient hangs on to life, however feebly; but a certain change, amounting in cholera to decomposition, is incom-

patible with life, and this is the stage of death. It is for want of such an explanation that there has been so much difference of opinion as to the nature of collapse. To conclude, we say that collapse is a state in which all the vital operations are impaired, and the blood somewhat deteriorated, within limits which we cannot define, but of which we can judge by the phenomena presented; the patient may survive, or after suffering for a period indefinite, perishes: in the first case the blood preserves its integrity to a certain degree, in the latter the blood is wasted or decomposed, and death is an invariable consequence.

(E.)

We wish to call the attention of the reader in this place to the facts, of the case of Mr. Oliver, reported at page 350, of the present number. We have already informed our readers that, excepting opium, we used no stimulants in the treatment, either in our hospital practice, or in our private walks—The case before us is calculated to show, in a high degree, the safety and advantage of the antiphlogistic plan of treatment. Thus, we are informed that the patient took five grains of quinine at a dose, afterwards three every hour—also, full doses of camphor and ammonia; in combination, however, with large doses of calomel. "Shortly after his admission, he had a small watery evacuation of a dark brown color—pulse feeble; tongue covered with a light brown fur; surface warm; complains of slight pain in the stomach—*does not recollect having passed any urine since he was taken sick.*" Now, although we admit that this patient is better than when seen by doctor Morris, still it must be admitted that, his situation was critical so long as he had no return of the urinary secretion. There is still no reaction; and, yet, we ventured to discontinue the tonics and stimulants, and rely on calomel and nitrate of potass—and the compound solution of soda. It is said that the "surface was warm;" but this must be understood to mean comparatively so, since doctor Mackenzie thought proper to direct "hot sand to the extremities," when he came in. The day after his admission, he "had several dark bilious evacuations," and the "tongue is brown, the pulse improved"—"small quantities of urine passed"—same medicine continued—second day after the admission, free urinary discharges—dark passages, very offensive—It may be asked here, is it reasonable to believe that stimulants are the proper remedies, in cases attended with those vitiated bilious evacuations?

But, what is more particularly to the purpose—the stimulant plan was suddenly dropped, the most refrigerant medicines given, and the patient rapidly recovered. This case in a strong manner shows the advantage of free doses of calomel, and that

UNIVERSITY OF MICHIGAN

a slight ptyalism is no obstacle in the way of recovery. The particulars of this case go to support the opinion, which we have elsewhere expressed that, we never in any case, or under any circumstances whatever, saw any benefit derived from tonics or stimulants; but, on the contrary, we have again and again seen cases that were stationary, or growing worse under the use of stimulants or tonics, rapidly grow better upon changing from the stimulants or tonics to a plan strictly antiphlogistic; and as regards medicine, no one, or any combination, was so obviously, and so uniformly useful, as pretty free doses of calomel and nitrat of potass, preceeded mostly by a large dose or two of opium and calomel.

Continuation of an Appendix, containing observations upon Epidemic Cholera, as it appeared at Baltimore, in the summer of 1832.

In our last number we have given a full account of Epidemic Cholera, as it came under our notice in its milder forms of dysentery, cholero-dysentery, and cholerine. We there acknowledged our deficiency of knowledge of the malignant form of that disease, from actual observation, owing to our not having had an opportunity of making clinical observation. But our last number had scarcely left the press, until the epidemic began to assume its malignant aspect; and, our hospital reports will show, that there was no want of opportunity of making ourselves acquainted with the disease, so far as our ability might enable us to profit by such opportunity.

We have already given most of the information derived from the hospital practice—a few particulars have been reserved for our appendix, designed as a part of the article under consideration; but we have been led to believe, that a brief sketch of circumstances which came under our notice, in private practice, may be useful to those who are not familiarly acquainted with the disease in view. It seems to us proper to premise our professional remarks, with a brief notice of the localities of the disease.

It will be observed by turning to our hospital reports, that the disease first appeared in Ruxton lane, but that it subsequently spread through most of the city, and was by no means most prevalent in situations commonly liable to bilious diseases of a high grade; but, especially there was no affinity in this respect, between places in which yellow fever usually prevails, and those in which epidemic cholera shewed itself. Generally, the most fil-

thy and crowded streets and alleys suffered most, but there were exceptions to this; so that, in some instances, where one should have looked for cholera to exist, it appeared slightly or not at all, while other situations remarkable for their usual healthiness, suffered in a greater degree than those in which yellow fever is most commonly seen.

We have stated in our second volume, that yellow fever was most clearly confined to certain limits—these we need not particularize at this time, but it may be avered as a fact without one exception, that in a considerable portion of the upper part of the city, yellow fever never has appeared, except where it could be most clearly traced to exposure to the contaminated neighbourhood in the lower parts of the city. On the other hand, it was seen that cholera was not confined to any fixed bounds, whether we look to location simply, or to location associated with general heathiness, or the opposite state of things.

The most remarkable instance of extraordinary suffering from cholera, in persons of respectability, occurred in the street in which we reside, Liberty; and, where in a residence of many years, we have not seen more than a case or two of bilious fever; none of which terminated fatally. In this street, remarkable for its salubrity, there was not only much mortality, but a majority of the deaths were in persons of *respectability*, and exemplary in their habits—if we here except the fact, that most, if not all of them were imprudent in the use of *forbidden fruits*, &c. In this street we believe it was that the first case of cholera of malignant form occurred, and terminated fatally, in the person of a child of respectable parentage.

It is a curious fact, but one which is well established, that in Baltimore, intermitting fevers are not so common in the usual locations of yellow fever, as in the suburbs; and so it may be said of cholera, it did not prevail most in the yellow fever locations, but shewed a most decided preference for situations in which intermittents are most common, with a single exception, as far as our observation enables us to judge, and that is in Liberty street, where we are not aware of intermittents having prevailed for many years past. It is proper to observe here, that that part of Liberty street which suffered most from cholera, is made ground, there having been in former years, a large gulley, which served as a drain for a large portion of the upper part of the city; but this has been well filled up and the parts around have been well improved, so that the water which still descends in great quantity, down this street, in time of heavy rains, passes over the surface of a perfect pavement, which is kept clean by the washing, and by the constant labor of scavengers. Notwithstanding this apparent affinity between the locations of intermittents and

UNIVERSITY OF MICHIGAN

epidemic cholera, we have to notice the fact, that but few cases of intermittents were seen this summer—at one time, towards the close of August, our diseases seemed to assume more of a bilious character, and afforded strong hopes in my mind, that cholera would decline; but, in a few days, our febrile disease assumed more of their proper nature, and the bilious affections seemed to decline. In making this remark, however, I wish to be understood to speak of pure bilious disease, or such as presented the phenomena of febrile disease, known by the name of bilious remittents, since we found biliary derangements of various kinds to prevail extensively in cholera patients, wherever cases became protracted; and we have already remarked, that malignant cholera, as it appeared with us, wore most of the livery of yellow fever.

In our epitome published last summer, we gave a very brief view of the regimen most proper for the prevention of cholera—we then concluded our remarks, by saying *"once right, always right"*—merely qualifying our opinion, by saying that the state of the atmosphere was such as to render us all in some degree invalids, and therefore some abatement of the quantity was essentially necessary. Towards the conclusion of the publication alluded to, we observed that we had reason at that time for changing our opinion in consequence of having seen some cases of disease arising from the use of certain articles in which the effect so speedily followed the use of the artioles, as to leave no room to doubt of the evil which frequently arose from partaking of fruits and many of our more common vegetables.

It may not be uninteresting to give a brief recital of some of the more remarkable cases that came to our knowledge. A respectable female in the country, informed us that her son and two of his fellow laborers, in a cotton factory, being about to visit the city on business, she strictly charged them not to eat of watermelons, which were reputed to be particularly unwholesome. Deeming her caution the result of timidity, they purchased a melon for 6¼ cents, which would procure but a small one—they ate it by the way, and were all three presently overtaken with severe sickness and vomiting; and had enough to do to reach home. The disturbance of the stomach soon went off, and no further evil resulted from their disobedience—had these young men been predisposed to cholera, they would probably have been in danger.

Another instance of immediate suffering from eating watermelons, was related to us by a medical friend. A colored man bought a melon in the market, and ate it, as he probably was accustomed to do—immediately after having done so, he was seized with violent cholicky pains—a by-stander seeing his distress,

desired him to hasten to the dispensary building, which was several squares off. He sat off and ran five or six squares, when he dropped down in the street, wholly unable to proceed further. He was soon visited by an eminent physician, who did every thing in his power for him, but in despite of his humane exertions, this poor man died in about seven hours after the attack.

The following incident was related to us by a respectable friend: A colored man was seen setting on one side of the street, having in his possession a fine watermelon. He was overtaken by an acquaintance, who, asked him jestingly what he had there, and received for answer that he had a mess of cholera!—Well then, come let us eat your cholera! The melon was shared and eaten by them—early the next morning, one of these men died, and the other in less than twenty-four hours.

We were credibly informed that a young gentleman of great worth, and of exemplary temperance, refused entirely to conform to the strict diet used by those with whom he messed in a boarding house. While they abstained from vegetable diet, he refused to do so, and contended that cholera was the disease of the vicious, and that he could use vegetables with impunity. During the height of cholera, he one day partook of fried egg-plant, and after dinner ate some peaches—in a few minutes afterwards, he was seized with violent symptoms of cholera; and, after but a few hours of the most agonizing sufferings, died.

The following particulars were related to me, by the most respectable authority, respecting my most worthy and gentlemanly friend, doctor Cromwell, who fell a victim to this disease, though a man of fine constitution, and of exemplary habits. While he admitted the propriety of very sparing use of vegetables, he insisted that peaches were wholly innocent. A gentleman seeing the doctor buy peaches, at a time that almost no person of common prudence would venture to do so, asked him whether he believed them to be a safe article? The doctor replied that, as a proof of his belief of their perfect wholesomeness, he could tell him he was then buying some for a sick friend. A few days after this, the doctor, as usual, partook of some plumbs, of cantelope, and of peaches after dinner—in a few minutes he was violently seized with cholera, and notwithstanding the best medical aid, he died in a few hours.

My friend, doctor S. B. Martin, informed me, that a little girl came under his notice, who, while in perfect health, ventured to eat of green peaches, which her little playmates refused to do. In a few minutes she was seized with severe symptoms of cholera, and died after a very short illness. The children who had been with her during the afternoon, and who did not use fruit during the season, were not at any time affected with cholera.

UNIVERSITY OF MICHIGAN

We were requested, at the time that cholera prevailed extensively, to visit a poor family, where we found four children seriously ill from having eaten greenish apples. They were affected with pretty severe symptoms of ordinary cholera morbus. A medical friend had already given them a mild emetic mixture; to be given occasionally till they were relieved, or ceased to throw up the apples. They soon recovered, but their attacks were obviously owing to the apples which they had eaten. We could go on and enlarge our list of similar occurrences, to very considerable extent, but we have given, we trust, enough to show the direct connection in many cases, between the taking fruit into the stomach, and the attack of cholera which succeeded. We shall now relate a case or two somewhat different in their nature.

A young man of good health, of industrious and temperate habits, was boasting on a Sunday, near the close of the epidemic, that he had eaten every thing throughout the season with impunity, and that he had no fears for the disease—he ate freely of such vegetables as were afforded at the time. The next day he partook freely of boiled cabbage; was taken violently ill with cholera soon afterwards, and died before daylight on Tuesday morning.

This is one of many similar cases which came to our knowledge. But we need not extend our remarks, ninety-nine persons in a hundred, and perhaps a far greater number, were convinced before the cholera terminated that, most of our vegetables and fruits were unsafe, either as part of our meals, or taken intermediately; yet, I have met a few, who boasted of having lived through the season as they always had done, and with impunity. But independently of the risk of cholera from eating certain articles, so common were symptoms of indigestion, and slight complaints of the stomach and bowels that, the latter alone would have required an abandonment of the more indigestible articles of food or luxury.

The present writer was directed in the regulation of his food, by the condition of his stomach. Aware, before cholera had appeared in this country, that certain articles had been found injurious to those predisposed to the cholera, he had advised, in some of his first publications on cholera, the avoidance of certain articles, except in a very limited degree; and accordingly he continued to eat sparingly of most of our vegetables and fruits of the season. As the cholera atmosphere began to manifest itself more strongly, he clearly perceived that such articles began to incommode his stomach, and he was twice made very uneasy at the stomach, from having eaten a little peach and milk. Sourness, much flatulence, and gastrodynia occurred, and kept up a good deal of distress for several hours. Several friendly

admonitions of this kind attended the use of improper articles; and, also succeeded the eating of the more allowable articles a little more freely than was proper. Thus directed, without stopping in an extreme pressure of business to imagine any thing unreal, we endeavored, free from all anxiety, to regulate our eating according to circumstances. We reduced our fare to plain meats, bread, butter, a little potato, coffee, tea, milk, and rice. Those articles we used in quantities less by one half, than we had been accustomed to. We were engaged in the most active duties from 6 in the morning, our standing hour, till 10 or 11 at night, without more than a few minutes to dine; during which time we fatigued two horses daily, for several weeks, and were frequently knocked up at night. We were always sensible that we ate enough.

It has not been our design at any time, to enter upon a regular systematic account of epidemic cholera, but rather to collect and publish such facts and reflections, as seemed to be in good degree peculiar; hence it is, that, we have published the several items of which we treat, in a manner somewhat desultory; believing that by this method the subject will be the least tiresome to our readers, and will afford us a convenience, in pursuing a plan free from labored arrangement.

Such being our intentions, we shall decline giving any regular account of the symptomatology of cholera in general, and dispose of this branch of our subject with a few remarks, upon some of the more prominent items, both in relation to symptoms and the treatment; and, we believe all this will be most easily and profitably managed, by giving the particulars of a few cases; and afterwards a slight exposition of some of the more commonly employed remedies.

A very great majority of the cases which we saw, throughout the season, never showed, as far as we could judge, any tendency to run into the state of collapse; but we saw with extreme regret, that in some cases the transition from ordinary to extraordinary diseased action, was so sudden as to leave no room for foreseeing the symptoms which constituted the malignant form of the disease. This fact will be most easily shown, by exhibiting the circumstances which attended some cases on both sides, that is, cases which suddenly assumed symptoms of malignancy, and others which presented symptoms apparently of great danger, sometimes speedily changed by treatment, so far as to remove all appearance of danger.

About the time that the cholera was most rife, Lewis G. Wells, a colored man, who had devoted several years to the acquisition of medical knowledge under favorable circumstances, had become a busy practitioner among our colored people. The cho-

UNIVERSITY OF MICHIGAN

lera, having spread, made room for the most active exertions on his part, to administer to the wants of those affected with that disease. We do not know much of his views, or of his treatment, but we have been informed that he placed a good deal of reliance on dry rubbing; and was in the practice of applying the remedy himself. Being engaged for several days till very late hours in *running about, after his patients;* and almost constantly engaged in active rubbing, was calculated in a high degree to exhaust his strength, and predisposed him to the epidemic. In passing for the last time from his office to his dwelling, about 12 o'clock at night, he observed when near his house to his wife, that he felt a good deal unwell, and if he should be overtaken with cholera so suddenly or violently as to render him incapable, it was his wish that she should confide the case to doctor Jameson. In a few minutes they reached his dwelling, and he threw himself down upon the carpet, observing, that he was very ill. He was immediately seized with cramps, particularly violent in his legs—his wife and family were directed to rub his legs freely and somewhat hard; after sometime he attempted to bleed himself, but did not succeed, not having a moments respite from the spasms. At day light I was sent for, with a view, as the messenger said, of bleeding him—aware of the danger then attending this disease, and believing this man's life very important, not only to his family but to many of his colored brethren, we hastened to his relief, but found him in the last stage of collapse. He had been lying on the floor from 12 o'clock at night, till after five in the morning, and during all that time he had been under active and severe rubbing; and now cried out incessantly "rub down! rub down!" The pulse gone, his skin, tongue, &c. as cold as clay—though sensible, he was prostrated beyond all possibility of foundation for hope. Being in an agony of suffering, we gave him a pretty large dose of laudanum—telling him, however, at first sight, that we were called too late, and that death was near at hand. He coolly, and with a degree of indifference, which we think was common in such cases, desired me to take charge of some of his pecuniary concerns. His sufferings were heart-rending for more than an hour after we saw him, when he quietly expired. From what we have since seen, we feel fully confident, that if we had seen this patient within a short time of this violent attack, he might have been saved—his bowels were not loose during the night. He had had a diarrhea during the day, but not such as to alarm him, or to interrupt his business. But the strength which enabled him to walk home after the fatigue of the day, leaves room to hope that he was then in a situation to be saved by bloodletting, to such extent as might have been found necessary. With a view of substantiating this opinion, I

shall detail a few other cases, apparently similar, which yielded to this remedy.

My attention was called one morning by Philip Lawrenson, Esq. to a black man who was lying in Second street, apparently suffering the most extreme agonies. Being in our gig we lost no time in repairing to his relief. We found a stout muscular man rolling over the pavement, with his mouth widely open; his limbs contracted; his pulse very tense, but slow, and his groans and shrieks were most heart rending, and had attracted a large crowd of people. The man did not appear to have been drinking. The salt water emetic being then in vogue, we speedily procured a pint bowl of it, pretty strong, and of moderate warmth. He drank the whole of it willingly—we waited several minutes to see the effect—it had no effect whatever, and he continued to toss and moan as much as ever. Finding that he was not likely to vomit, we procured the necessary means and bled him on the pavement, believing that to wait until he could be got to an hospital, would be to wait until it was too late. When we had obtained about 30 ounces, we perceived that there was a slight change in the color of the blood, which was extremely dark and thick; and the patient now observed that the pain had abated in his stomach; directly again he said his stomach was entirely freed from pain, but it was still extremely great in his back. When about 36 ounces were drawn, he remarked that, now the pain was gone from the back, but he was sick—the blood was now most obviously changed to a pretty good red, but he was somewhat faint.

Being in a hurry we now left our patient, and desired a boy, who was in waiting, to carry him to the hospital, but to wait a few minutes until the faintness had gone off; then to get him into the carriage, and take him to the hospital, where we were then going.

Doctor Davis was present and concurred in the opinion with us, that we had taken about 36 ounces of blood. Before we proceeded thus far, one of the by-standers remarked that the man would be bled to death, and by an oath, he said, the man might as well die of the cholera as from bleeding. Soon after we left him, an attempt was made to remove him to the hospital, but he refused to go; this being insisted on, a controversy arose among the crowd; some insisting upon his going, while others, with equal zeal, insisted that he should not be sent without his consent. While they were disputing, he rose upon his feet, and passed out through the crowd, flung his arms about as he walked off; in this way, he set his arm to bleeding, and bled freely. He reached a resting place several squares off, where he soon regained his health, without any further medical aid. These latter facts were ascertained a week afterwards, by a friend—we think, how-

UNIVERSITY OF MICHIGAN

ever, that it is highly probable that the salt, which he had taken, would act as a cathartic, and thus aid the bloodletting, in relieving the patient from a situation truly perilous. If we may be allowed to give an opinion, after having seen much of the disease, we say positively this was a case of cholera; and we believe that a few minutes delay of the bloodletting, would have proved fatal. The undisguised and extreme sufferings of the patient, and the very dark color of the blood, until 30 ounces were drawn, showed this to be severe cholera.

During the height of the cholera, we were hastily called to see a young lady, who was said to be violently ill—upon our arrival at a distance of two or three houses, we found this young lady had been taken suddenly violently ill; she had the most agonizing spasms, and required of her friends, that they should rub her constantly and briskly; her skin was cool; her pulse though sluggish was tense, she was unable to stand; tongue moderately coated yellowish white; countenance exhibited great distress and prostration; an extraordinary sensation of sinking, and anxiety existed.

We found professor Potter examining this patient, who politely asked us to confer with him on the case, both of us having been called in, in the absence of the family physician. He was now in the act of bleeding her, of which we approved, and remained to see the effect. The blood was very dark; but, after a copious bleeding, the blood became lighter colored, and the spasms of the stomach and extremities ceased—the pulse became softer, more free and frequent in its action; her respiration and her countenance much improved. Aware that this was a case of violent disease, and that the truce gained by the bleeding, would be of short duration, unless other remedies were employed, we remarked to professor Potter, that we had some doses of pills, containing each a scruple of calomel and two grains of opium—he replied that, that was the very thing which he wanted, and forthwith directed a dose of them to be given. We returned, by appointment, in two or three hours, but being unavoidably detained a few minutes too late, the doctor had left the house. We found the patient in the most alarming spasms, which were general; and we were told that soon after we had left the patient, she was so much better that she was suffered to walk up the stairs, with the assistance of a gentleman to support her. We ascribed the renewal and the violence of the spasms, to the imprudence of suffering her to walk up stairs so soon after a pretty copious bleeding. She had been seized so suddenly, and so violently ill, in the sitting room of the family, that she could not be removed. We left the house under an impression that death must inevita

bly take place in a few hours; but in the course of the night she rallied, and in a few days, was restored to health. Looking back to this case, with such experience as we derived from a most faithful attention to the epidemic, we are decidedly of the opinion that this young lady owes her life to a prompt and energetic practice, consisting of a free and well timed bleeding, and a pretty full dose of calomel and opium, succeeded no doubt by proper treatment.

About the same time, we were called to see a young lady of delicate health, who was suddenly overtaken with feelings of great prostration, and a sensation of syncope; severe cramps of the stomach; cold skin; countenance greatly anxious; respiration a good deal laborious; tongue slightly coated; pulse very full, with little action. Never were we placed in a situation of more awful responsibility. We had seen several patients speedily sink from the loss of a few ounces of blood; we had seen others, in whom we had every reason to believe that death, which was near at hand, had been warded off, and recovery obtained by a well timed bloodletting. We tied up the arm, determined, as far as we could, to appreciate the effects of bleeding, as we proceeded. We soon found, to our inexpressible joy, that the pulse was rallying under the loss of blood, and in this case, as in many others, we were enabled to assure our patient, that the principal danger was now over. We had not only seen a good many cases in which the pulse reacted promptly, the blood became redder, and the depressed condition relieved; but we had remarked uniformly, that where bloodletting seemed to be prejudicial, the patients sunk almost immediately. In our own practice, we had seen two cases in which the lancet was used too late; and we saw several others, in the course of the season, where this circumstance was too manifest to be doubted. This remarkable difference in the effects of bleeding is, sometimes to be seen in other diseases; but, perhaps, in none so frequently, and in so obvious a manner, as in cholera. This condition of things will always be extremely perplexing to physicians, since no positive rule can be laid down. The only general rule which we were enabled to lay down for our governance, was to apply bloodletting in cholera, as we would in cases of hemorrhage.—Thus we have a patient laboring under a dangerous bleeding from the lungs, stomach, womb, &c., particularly from the lungs—the patient is as pale as death; his skin is cool, and covered with cold perspiration; there is great prostration; still when we examine the pulse, we find force or strength enough in the heart and arteries, to justify us in drawing blood, which we know, from experience, will arrest the bleeding from the lungs or part affected—We need not stop to explain how it operates; it is enough

UNIVERSITY OF MICHIGAN

to know the fact, and that however safe and salutary may be bleeding, under such circumstances, yet, if the heart and arteries are actually reduced below par, we can never expect the pulse to react by abstracting blood, as we know we may in common cases of depression, where there has been no direct exhaustion. So in cholera, while the pulse retains a certain amount of force or strength, and the blood is found very dark, but ready to flow freely, we may venture to bleed; and it will generally be attended with the most happy results, affording mostly an amount of relief, and that very speedily, which we have not witnessed in any other disease from this remedy.

We have to state that, in nearly all the cases in which we saw very clearly marked benefit from bleeding, there were no very great evacuations of *rice water fluids*, by the mouth or per anum; there had generally been more or less diarrhea, but not such as to excite much alarm; when, all of a sudden, the patient was overtaken with rending spasms of the stomach, bowels, &c.; a tension about the heart, and spasms of the legs—We saw one case of violent spasms of the muscles of the face. We saw a few cases in which bloodletting was eminently useful, notwithstanding the presence of rice water discharges. The same rule was observed here as in other cases, in employing the lancet, that is, to bleed as we would for arresting hemorrhage—suddenly prostrate the heart and blood vessels by abstracting blood while these structures are oppressed with over excitement, and you thus arrest the morbid and overwhelming excitement present; but bleed after the vital forces are exhausted by the emptying of the vessels of their blood, and you can never cause the vessels to react, but by lessening the amount of stimulus already too small, by abstracting blood, either in cholera or hemorrhage, your patient is irrecoverably exhausted.

One of the most important circumstances connected with bleeding, in cholera, is this: whatever be the nature of the case requiring bloodletting, the period in which it can be safely applied, is almost always extremely short; sometimes but a few minutes. It might be supposed that in cases attended with wasting serous discharges, bleeding could not be practised with prospect of success, because the ricewater fluids discharged, contain much, or consist principally of, the serum of the blood. It was this circumstance which led us to a proper view, as we hope, of the employment of bloodletting. Thus if we see the blood pouring from the lungs, and our patient pale, and sinking, we know, by experience, that for a time, or until a certain amount of blood has been lost, we may arrest the further effusion of blood, by abstracting a portion of this fluid, and thus check a fatal tendency in the disease; so, in cholera, a portion of the

blood is passing off rapidly—divert the morbid action which is pushing, so to speak, the blood or serum out through the exhalents of the bowels, &c., and you thereby prevent the further loss of serum; and, as has long been said, and correctly too, under proper qualifications, it is better to bleed from the arm than from the lungs; so of the case before us, it is better that the patient should loose a considerable portion of blood from the arm, than that the serum of the blood should be poured out in torrents.

Finding, pretty early in the summer, that epidemic cholera would, in all probability, invade our city; since in addition to the tendency which the disease had shown to extend itself, over a considerable portion of the world, we had the forerunner of the epidemic actually within the city in the forms of cholerine, &c., &c. Anxious, under such circumstances, to avail ourselves of every opportunity, for obtaining information on a subject so vitally important to our citizens, and the more so from the fact of holding the important appointment of consulting physician for the city, we called on professor Potter for the purpose of ascertaining whether he had any thing useful to communicate. Although no intimacy had existed between us for several years, this gentleman showed a ready willingness to exchange views with us. He at once stated that he had read so much on the subject, and had seen so much discrepancy of opinion, both as to theory and practice, that he was in some degree undecided in his opinion; nor could he be prepared to settle on any positive opinion, until he had seen something of the disease, but that he would willingly see any cases with us that might fall in our way, &c. For the present he would only remark, that, in some forms and stages, he believed opium would be found a very important agent; that in a case wearing much the appearance of violent cholera, he had given four grains of opium at a dose, with decided happy effects. Brief as was this communication, and unimportant as it may seem to many, it was to us a matter of much importance. This occurrence leads us to make a few remarks upon the subject of opium, as a remedy in the treatment of this disease.

It will be recollected that we advised a compound saline mixture, in cholerine and cholero-dysentery—It may also be recollected that, my friends doctors Carrere and Mackenzie, used this medicine extensively in hospital practice; and that they were well pleased with its effects. This mixture, which is composed of supercarb. sodæ ʒj, ol. sassaf. gt. v, tinct. opii gt. lx, aq. puræ ʒvj, though containing but little opium, owed no doubt a considerable share of its soothing, and other pleasant effects, to the opium in it.

UNIVERSITY OF MICHIGAN

In the course of the season we had many opportunities for observing, that notwithstanding there was a good deal of febrile action in many cases, and that all our dissections showed a turgid state of the vessels of the mucous coat of the stomach and intestines, still we have never seen opium so generally admissible, during the presence of symptoms which seemed to forbid its use. It was in the early period of the disease, however, that we observed the most decided good effects from large doses of opium; and, under such circumstances, to give it in small doses, was to say the least useless.

We never saw a disease in which any remedy seemed to approach so near the nature of a specific, as did opium in the incipiency of cholera; for, according to our observation, it was suited to the disease in every form, attended with any severity; and in scores of cases we have seen the most pleasing effects, from large anodynes, particularly when given in combination with calomel. So often did we witness the most decided benefit from pretty large doses of calomel and opium, that we gave it in the most unpromising cases at the commencement, with a degree of confidence, little short of certainty—indeed, we can truly aver, that this combination never disappointed us in a single instance. We have elsewhere stated that, we saw a very inconsiderable number of cases, that had progressed so far as to lead us, at first sight, to consider them incurable; but we met but a single case, in which we lost a patient, whom we had hopes of saving; but in this case there had been mismanagement on the part of the patient, though a lady of much good sense and amiability.

We are too imperfectly acquainted with the pathology of cholera, to attempt an explanation of the modus operandi of opium; but our experience with the article convinced us, that in combination with calomel, it had a most powerful influence, in checking the rice water discharges; in allaying the irritability of the stomach, and in arresting spasms, both of the stomach and of the extremities. Where these symptoms set in suddenly and violently, it was safest to conjoin bloodletting to the use of the calomel and opium. We saw one interesting case of cholera, in which rice water discharges gave way to copious bilious discharges, and these discharges were succeeded by complete ileus, attended with the ejection of dark thin fecal matter, in large quantities. In this case an emetic of strong salt water, and 3 grs. of opium in one dose, at once arrested the ileus; and the patient recovered in a few days.

We never, however, repeated the opium more than once or twice, and more generally we did not repeat at all. In a few cases it was given in moderate doses, in the form of dover's

powder, or laudanum and spirits of nitre, mostly where the spasms were obstinate. There was an unusual circumstance attending the use of opium, which we met so often, as to justify us in insisting upon the fact; in no case where it failed to afford relief, did it for one minute deceive, by giving ease—if a full anodyne failed to give prompt relief, the patient always perished; but wherever the patient was promptly and materially relieved by the use of calomel and opium, they always recovered. We did not in any instance give more than six grains of opium in 24 hours, and this quantity very seldom.

It will appear by turning to the descriptions of doctors Carrere and Mackenzie, in their hospital reports, many of whose dissections we witnessed, that, we were compelled to view malignant cholera, as a disease attended with a highly congested state of the mucous coat of the stomach and bowels. In every instance, which we witnessed, the bowels and the stomach were so reddened that upon removing the peritoneum, the entire tube appeared of a pretty deep red—redder than we had ever seen in any disease, excepting, perhaps, a case or two of death from strangulated hernia. Close inspection showed the injection of vessels to be confined to the inner or mucous coat. In one case, the stomach was mottled over with splotches of various sizes, from that of a dime piece to that of a dollar, as red almost as scarlet—the intestines were also most remarkably red. So remarkable was the redness, that we were induced to make an effort to obtain a colored drawing of a portion of the stomach and intestines—for this purpose, we brought portions to town, and used our exertions to get the aid of Mr. Smith, the drawing master in the Mechanic's Institute, in making a drawing; but, notwithstanding that we availed ourselves of the polite and friendly aid of the vice president, Jos. K. Stapleton, Esq. Mr. Smith promptly declined, because his family, as he said, would not give their consent that he should expose himself to the risk of taking the disease, and, therefore, his aid could not be obtained in perpetuating that which was of primary importance to the health and welfare of our citizens; and for which we were willing to pay any reasonable amount. We have no feelings to gratify in thus representing this singular fact, but as it is a strong instance of the evil which attends the belief in, and fear of contagion, we have thought it due to the public to let them know of this fact. To our mortification and disappointment, this effort at obtaining information, on a subject of such vital importance was thus frustrated, and, in two hours we were astonished to find the whole of the parts we had carried home, a mass of downright putridity; and this fact too, may be useful, for we did not hesitate to endeavor even now to unfold the coats of the stomach, hoping that we might dry them, and show their injected state; but we could scarcely recognize any thing like organi-

UNIVERSITY OF MICHIGAN

zation. When it is known that we opened the body, dissected out these parts, carried them home and examined them, when wholly putrified, it must be admitted that we ran every possible chance of being infected, if there had been any thing like contagion in the case.

But to return from this digression, we wish to repeat, that there was a high degree of vascularity in the mucous coat of the stomach and intestines, in nearly every case in some part of the tube. This fact convinced us, at once, that in this state of things no possible good could arise from the use of stimulants or tonics; we, therefore, at a very early period of the epidemic, turned our attention to the use of the most mild antiphlogistic remedies. Associated with this view of the subject, we were aware that one of the most uniform symptoms of malignant cholera, is the suspension of the urinary secretion. The indications then, appeared to be to employ such remedies as were calculated to allay irritability of the mucous surface, lessen vascular action there, relieve the bowels of sordes, excite the liver into healthy secretion, and at the same time promote the secretion of urine. For fulfilling these indications, we employed large doses of calomel, (from 10 to 30 grs.) with moderate quantities of the nitrat of pot; and, with the use of these, we alternated the compound saline mixture. This plan answered our expectations; and in all cases in which there appeared to be any ground for expecting benefit from any treatment, this plan was found singularly useful. Often it was made more efficient, by using as auxiliaries, sinapisms to the epigastrium, or blisters to the same region. Where the calomel did not operate sufficiently upon the bowels, after the diarrhea or sickly purging had ceased, other purgatives and aperients were found useful. By reference to the hospital practice we shall find, that where bilious symptoms become protracted, and this was frequently the case, aloes, scammony, croton oil, &c. were eminently useful; and were generally necessary so long as the alvine discharges continued much disordered. After there appeared to be material improvement of the biliary secretion, castor oil, and a combination of senna and salts or rhubarb, were found very useful.

We remarked, both in our hospital practice, and in private, that the nitrate of potash had a most salutary influence over the kidneys; and it almost never offended the stomach, when given in combination with calomel.

The remarkable torpidity of the kidneys, and the peculiarity of the mental condition, consisting of a dull indifference, as to the issue, led us at one time to imagine, that a part, and perhaps the principal danger arose from the presence of urea in the system. It is well known that in paruria inops, the danger is extreme, and sudden; and that when the disease exists in strength,

there is a remarkable blunting of the mind. We have never seen so great and general an indifference, as to the issue, as in cholera:—mostly patients could hear a most unfavorable prognosis of their case, with the utmost indifference; and we saw but a single individual who expressed any fear of death: now and then we met persons of abandoned habits, who were anxious to see a clergyman. In short, nothing is more common in cholera than a peculiar indifference or dullness of mind; and this state, together with the almost universal fact, of there being a suspension of the urinary secretions, led us to direct our remedies particularly to this state of things; we, therefore, gave the tinct. cantharides a trial, as will be seen by turning to the case of Francis Johnson, in the practice of doctor Carrere; the doctor, and myself, were decidedly of opinion that, the remedy was attended with a very good effect, and probably saved the boy's life. It was tried in some other cases, in which its influence was very doubtful, and was soon discontinued, from a full conviction obtained, by a more extended experience, that no stimulants were called for; and, indeed, they generally were hurtful: but, especially, we laid aside the cantharides, because we found the nit. pot. to answer our expectations; and its properties seemed better united to the pathology, which we adopted of the disease. This is certainly one of the curious circumstances attending cholera, that the secretion of urine may be suspended for one, two, or more days, and we have no clear evidence of the presence of urea; and, yet, in some other forms of disease, it is found that interruption of the urinary secretion is soon attended with an accumulation of urea in the blood, and if this state of things continues, in any tolerable force, the patient perishes.

Local bleeding, by leeches and cupping, have been a good deal employed—the employment of these remedies must be attended with great inconvenience, in times of an epidemic, so violent as is cholera, owing to the length of time requisite for completing these tedious operations; but independently of these considerations, we never saw any clear indication for topical bleeding; and in the few cases in which we saw it used, we were led to believe that, no good was obtained from it. There is a remarkable tendency to congestion of the vessels of the mucous coat of the stomach, and intestines, but still this congestion is by no means inflammation; nor does it require the same kind of depletion as does inflammation. According to our observations, where sanguineous depletion was necessary, it was required promptly and copiously—This remark, however, applies to the more strictly cholera stage, or in the period in which danger arises from a tendency to decomposition of the blood; and, as a preventive to this tendency, we believe no dependence what-

UNIVERSITY OF MICHIGAN

ever can be placed on local bleeding—When this stage shall have given place to more ordinary febrile, and bilious symptoms, this remedy is no longer necessary. If there be any exceptions to this remark, they are very few. Now and then phrenitis supervenes upon the more ordinary symptoms of cholera. Under such circumstances, perhaps, local bleeding may be practised beneficially; but, as far as our observation went, there never was an absolute necessity for this remedy. In all cases attended with great prostration, blistering the neck, and the use of dover's powder, had a good effect; while in all those attended with excitement, to even a moderate extent, general bleeding was found very useful. We saw one case in which, after a severe attack of cholera, so soon as a state resembling convalescence, appeared, the patient exhibited strong symptoms of mania à potu, and required strapping to the bed-stead, to prevent his escape; we recommended the abstraction of blood from the arm; it had a most happy effect, and was repeated. We will not undertake to say what was the result of local bloodletting, in the practice of others, but we do not hesitate to say, that we never saw any indications for this remedy early in cholera, and except in cases of phrenitis, it was seldom necessary, and seldom of much utility, even in these cases.

However little we may know of the true pathology of cholera, it is evident, that the main tendency of the poison is to produce debility of the stomach, bowels, liver, and, indeed, all the abdominal viscera; so much so, that, long before the disease assumed its malignant form among us, almost every one was aware of some impairment in their digestive organs, and hence it was, that one of the greatest and most common difficulties attending the treatment of cholera, was to get your patients into a condition to bear food. In a great majority of severe cases, the digestive powers were so much impaired, that it was with extreme difficulty that patients could resume the use of the mildest articles of food. We had often seen injury arising from the use of improper diet, in bilious and other fevers; but never did we see any thing, bearing any comparison with this state of things, in cholera. At both hospitals, patients committed excesses in this way, in despite of the most careful watching, and some of them died in consequence of their imprudence. In many cases, nothing but thin gruel, sago, toast water, common tea, or other drinks equally mild, could be borne for more than a week; and, often in private practice, we had considerable trouble in giving tone to the bowels, which would prevent frequent attacks of diarrhea. Although we are among those who pay much attention to the regimen of our patients, at all times, yet, we were made sensible that the utmost circumspection was necessary in

the regulation of the regimen in cholera; even in the stage of convalescence.

There are few circumstances connected with cholera, in which there is so general an agreement, as in that of placing a good deal of reliance on the employment of external heat in its treatment. When we look at the deep concern which the skin seems to take in the diseased action, we are readily led to imagine, that since there is so remarkable a manifestation of diseased action in this structure; therefore, to it should we, in an especial manner, direct our remediate agents. By the circumstances present, we cannot but recognize the remarkable sympathy which exists between the mucous surfaces of the alimentary tube, and the skin—a fact well known to doctor Sydenham, and more familiarly known to the latest and best pathologists—nor is the close sympathy between the skin and internal surfaces less remarkable, or less known to physiologists in a state of health.

Looking to the very general employment of external heat, and to the symphathies above noticed, we, too, were led by our reading and reflection upon epidemic cholera; to hope, that among the more powerful agents, in its treatment, would be found external heat, and the external application of stimulants. The majority of voices, we believe, in Europe, had declared in favor of dry heat. So soon as we saw the disease in its malignant form, and beheld the shrivelled, hardened, welted, and cold state of the skin; and all this attended mostly with a copious transudation of clammy cold fluid, we were led to expect much from the application of heat, and stimulants externally applied; but as we have already intimated, we soon found the regular and effectual application of dry heat, next to impossible; and, that, so far as we could perceive, no good resulted from it, in a very large majority of cases, if in any case whatever. Nor was it long before we were led to believe that, our external stimulants had no salutary influence, excepting only sinapisms with the intention of relieving partial irritation of the stomach, or head, &c. As far as we could judge, we never saw external stimulants useful, in overcoming a dangerous amount of coldness of the skin or extremities; nor did they ever seem to improve the vascular action of the skin, or relax or soften it, raise its temperature, lessen the exudation, or impart a more agreeable state of feeling to the patient. Such being our conviction, pretty early in the epidemic, we entirely discontinued the use of external heat or stimulants, so far as any supposed influence they might have, in arresting the disease, by operating through the skin as a medicine upon the internal organs, was concerned.—With a view of balancing excitement, they might sometimes, perhaps, be useful, particularly heat, in imparting such an aug-

UNIVERSITY OF MICHIGAN

mentation of temperature, as would lessen, in some degree, the disproportion of heat between the internal and external surfaces. But to our apprehension, whatever may be the fact in other diseases, you might as well expect to cure the pain of hip disease, by applying remedies to the knee, as to cure cholera by applications to the skin. Indeed, it does not seem reasonable, when we look at the deeply diseased state of the skin, that we can operate through it upon the internal organs; it is enough to expect of this truly important structure, that it can be relieved of its own share of the disease, by remedies applied to it. Our limits do not admit of our investigating this subject as freely as we could wish, we shall therefore conclude this part of our subject, by stating that we placed little reliance upon external heat or stimulants, except heat to the feet, and sinapisms, on account of local irritation—that this practice was adopted after we had carefully tested the influence of external agents, and our trial made under prejudices in favor of these remedies, because they had been almost universally employed; but now and then we saw good effects from camph. spts., where there were spasms.

Believing as we did that, one of the important indications to be fulfilled, in the treatment of cholera, is to relieve the skin of the large portion of the diseased action which it suffers, we resolved upon trying the effects of oily applications; and recollecting the good effects attending the application of hog's lard, in cases of phlegmasia dolens, and other painful swellings; and this being an article easily obtained, and at low price, we made trial of it. When we found patients affected with great coldness of the skin, and exudation, we directed the extremities, and over the stomach, to be rubbed with melted lard, and well rubbed on, first wiping the skin dry. It was soon evident, that, this remedy softened and warmed the skin in greater degree than any stimulants; and lessened the disposition to exudation, in much greater degree. Indeed, in most cases a few repetitions checked the perspiration, and greatly improved the skin in respect to temperature, pliability, and wrinkling; and in all respects, gave a more healthful aspect to this structure. The gentlemen who had charge of Hospitals No. 1, and 2, were well pleased with the results of this remedy—We beg leave to recommend it as a very important agent; and, we were pleased, at the close of the season, to hear from prof. Potter, that he had used this remedy with good effect, and that he was determined to speak favorably of it in a publication, which he purposed to make upon the epidemic. I then understood this gentleman to say, in most unequivocal terms, that his opinions both in regard to the main pathological views, and the treatment of the disease, were similar to ours. We are pleased then to state, that the opinions and practice recommended by us, have the sanction of so good a judge.

We have stated in the present article, that it is one of the well known laws of epidemics, that they partake of a revolutionary character—that is, there are certain periods, of indefinite intervals, in which epidemic diseases appear and disappear, or change their nature, from time to time, by appearing in greater or less force; or with some peculiar modifications. Such being the fact, we should keep a watchful attention for some time to come, over the character of our diseases, and even in our manner of living; otherwise, we, the community, may be unexpectedly overtaken by the disease when we are in no degree prepared for it. In the late visitation, the disease originated abroad, and gradually approached us, and thus were we providentially enabled to make preparations for its reception, but for which we should, no doubt, have had to deplore the loss of a very great number more of our citizens. On another occasion, it may rise up among ourselves; let us, therefore, endeavor to be ready!

It is, however, a most pleasing fact, that for the present, and for some weeks past, epidemic cholera has disappeared; and it has not left a vestige of itself behind. We have not seen, nor have we heard, of a case, that wore any similitude to malignant cholera, nor indeed epidemic cholera, in any of its forms. This is not, however, a new fact in the history of epidemics; typhus, and yellow fever, as well as most epidemics, have sometimes disappeared as suddenly, as if they had been blown away by the winds; and, being so removed, they have remained away for periods of several years, in some instances.

Some years since we attended the Baltimore jail, as physician; typhus fever was prevailing when we commenced our attentions, and continued altogether upwards of a year and a half—after continuing more or less, during a whole winter season, we had an unusual number of cases in the month of March: with a set consisting of seven or eight, all taken within the period of one week, the disease ceased; and, not a solitary case was seen for several years afterwards; and, so far as we had knowledge of the premises, there was no change, no improvement of the condition of things visible. Such instances are comparatively rare, and should not, therefore, influence our conduct, since, in a very great majority of cases, epidemics are the result of a contaminated atmosphere, and, which state of the atmosphere, is apt to continue for a series of years, often ceasing during a part of the year, and recurring year after year, at the same season—sometimes, however, the period of appearance changes somewhat, so that the disease comes earlier or later in the year, or assumes peculiarities.

It is hoped that enough has been seen of epidemic cholera, to put the notion of its being contagious forever at rest. Even in our own city, the existence of such an opinion, has been a source

UNIVERSITY OF MICHIGAN

of considerable expenditure, for supposed measures of defence, which have never done any good; and, much anxiety, disease and danger, no doubt, arose from the prepossessions among a portion of our citizens, that the disease is contagious; and the evil was greatly increased at one time, by the ill-timed declaration on the part of some of our medical men, that the disease was contagious.

BIBLIOGRAPHICAL NOTICE.

Letters on the Cholera Asphyxia, as it appeared in the city of New York; addressed to JOHN C. WARREN, M. D., *of Boston, and originally published in that city; together with other letters, not before published.* By MARTYN PAINE, M. D. [*Presented "to* DOCTOR JAMESON, *with the respects of the Author."*]

THIS publication was lately put into our hands, by doctor Cohen, of this city—We have read it with great satisfaction. The author discovers a mind qualified, in a pre-eminent degree, for the investigation of medical knowledge; and a zeal, and an amount of industry, which are alike creditable to him as a philosopher, philanthropist, and man of business.

The field of observation having been ample, it was to be expected that, a work devoted to the history and nature of cholera, together with the various plans of treatment, would afford its readers a goodly portion of important information, on these several subjects; and, in looking through the little work of doctor Paine, with such an expectation, we are by no means disappointed; on the contrary, we perused the book, and closed it, impressed with the belief that, our author had disposed of the subject matter, in so perspicuous a manner, as to entitle him to our respect for his talents, his industry, and the general ability with which he has acquitted himself.

We are not a little pleased that this publication, which bears such strong evidence of fitness for observation, and opportunity of profiting by it, and a corresponding production on the part of our author, is calculated to corroborate the views which we have advocated in this Journal, in greater degree than any thing which we have seen; and this remark applies to every important branch or particular connected with the late epidemic.

Whether we look to the post mortem appearances, or the plan of treatment; we observe a striking resemblance between those related by doctors Carrere and Mackenzie, and those of our author. The experience of our author was ample, and he tells us,

that notwithstanding the very general employment of stimulants and tonics, in New York, they were not found useful under his own observation; whereas, the antiphlogistic plan succeeded well, in circumstances in which we might seasonably expect benefit. We are also told that, the camphor plan was not to be relied on, in severe cases of disease, notwithstanding the character which it obtained at one time in New York. Our opportunity enabled us to decide positively that, no dependence could be placed on this article as a chief remedy; on the contrary, several of our friends were disappointed in using it; and, indeed, in a few instances, great danger arose from delay, occasioned by waiting to try the effects of camphor, before our advice was obtained.

However much may have been written in Europe, and in this country, on the subject of cholera, we have no hesitation in saying that, no book which we have seen affords an equal amount of useful information, in the same compass, as does that of doctor Paine.

We do not wish, however, to be understood to say that, we agree on all points with our author; on the contrary, there are a few items upon which we differ—it is not our intention to write a review of the work; we shall, therefore, confine our present notice to one important subject, upon which we hold an opinion different from that of our author—thus, it is said that, "in New York we may be said rather to have suffered several endemics than a general epidemic." We were told in some of the publications of the day that, cholera morbus, dysentery, and malignant cholera prevailed at the same time in New York, as has been the case in most cities where epidemic cholera existed; but will it be contended for, that these are essentially different diseases. We have elsewhere given our views upon this subject, and need not, therefore, enter again into an investigation of it—it may suffice here to say, that, we see these different forms of disease so inseparably blended, so often changing from one form to another of the same set, that, we are compelled to consider them all as the result of one common cause, operating under different modifications. We agree, however, in the opinion which our author advances, that the disease at least in cities, requires for its production the co-operation of local misasmata with the general epidemic poison." This point of our subject has also been under consideration in the present volume of our Journal. We will, therefore, briefly state as our opinion, that it must be some peculiar, and, to us a new, form of malaria, which gives rise to cholera—thus cholera, as lately seen, was a new and peculiar disease, it must, therefore, have had for its *essential cause*, something not heretofore present. Admit this, and we do not see how

UNIVERSITY OF MICHIGAN

it can be denied, and it will follow, that ordinary materials, which we have been in the habit of designating as nuisances, cannot be that cause, because these are always present; and if they were not sufficient to keep up cholera at all times, it would seem unreasonable to say that, they may nevertheless be the cause now, although they have never given rise to cholera in New York until the year 1832. The only true explanation, we think, is this—all poisons, which produce diseases in the human body, must act on it as a medium—this medium, we know by experience, varies as seen in different individuals, and in the same individual at different times—thus, we take two persons and expose them to small-pox; the one has been living sumptuously, the other upon a plain meagre diet, for a certain number of days or weeks. The former, in ninety-nine cases in the hundred, will have the small-pox violently; the other will have an equal number of chances to have it very mildly. So then of cholera, let the body be considered as in a changeable condition—expose the body to ordinary malaria, or the sources from which it emanates, and the poison of cholera will excite a virulent disease; but, modify the susceptibility, by a proper observance of measures which ordinarily predispose to health, and the cholera poison is, in a good degree, deprived of its virulence; or rather it is prevented from giving such a malignant tendency to the disease, as may arise from the opposite state of circumstances, or common contamination of the air.

We consider the following observations of doctor Paine important, and entitled to a passing notice. "Here, as every where else, the disease was most malignant at its irruption, and has become milder as the epidemic air has abated. Most of the subjects perished at first; and our greater success now arises from the mild condition of the disease, from a longer duration of the premonitory symptoms, and from the more susceptible class having been swept away." This was strictly true in Baltimore; but, this assertion requires some qualification. Here, as in most places, malignant cholera was preceded by cholero-dysentery, and cholerine, and throughout a great portion of our interior country these were the only forms in which epidemic cholera appeared during the last summer; but it is nevertheless strictly true, that wherever this disease became malignant, its malignancy was greater within the few first days of its existence.

We believe it will not be doubted that, New York suffered more from cholera than Philadelphia or Baltimore, whether we allude to the amount of mortality, or the duration of the epidemic. To what can this difference be attributed? We have no hesitation in saying, it is owing to the absence of good water, with which Philadelphia and Baltimore are so abundantly supplied. It is to be hoped that the city authorities of New York

will not, much longer, suffer so remarkable an opprobrium to hang over their prosperous city, as that she has no good water. No one, whose taste is not basely corrupted, can be insensible to the unrivalled luxury which we possess in good water; and few can be unacquainted with the necessity which exists, that the human body be supplied with wholesome water, or it cannot long remain in full heath. New York owes it to her citizens, and she owes it to those who lend a helping hand in her prosperity, to afford them good water, when they visit on business or pleasure. Ask death to supply New York with good water, and he will tell you no; I will thus lose hundreds of my subjects annually.

UNIVERSITY OF MICHIGAN

INDEX.

Allen on acute rheumatism, ... 254
On tumors of the head, ... 257
Advertisement, ... 1
Aneurism cured by tying subclavian, ... 35
Aneurism, case of 40
Appendix, ... 431
Apparatus for injecting veins, ... 433
Bloodletting in cholera, ... 448, &c.
Calomel and opium, ... ib.
Reflections on post mortem appearances, . 454
Objections to stimulants, ... 453
On local bleeding, ... 456

Burns and scalds 91
Board of health correspondence, ... 385
Bradford on umbilical-hemorrhage, ... 274
Breast milk, diseased state of 87

Cholerine, ... 213
Treatment of 223
Cholero-dysentery, ... 222
Cholera, epidemic, ... 283
Hospital reports of at No. 1, ... 343
Hospital reports No. 2, ... 283
Carrere on Cholera, ... 283
Cholera, historical sketch of 370
Case of in February, 1832, ... 371
City legislation in anticipation of cholera, . . 373
Call by board of health of Savannah for information respecting cholera, ... 385
Carrere's reports, summary of treatment at hospital No. 2, 386
Cholera, popular discourse on in an introductory lecture, 395
Cholera morbus, observations on, ... 5
Cazenave on diseases of skin, ... 125
Cholera by Madras board of health, ... 166
Observations on by Warner, at hospital No. 3, 407
Cases and treatment, ... 417
First malignant case of 378
At Hamburg, ... 5

Diseases of the skin, ... 124
Diseased condition of the breast milk, . . . 87
Dissections of cholera subjections, . 24, 25, 26, &c.

Diffenbach's experiments on cholera, . . . 67
Different forms of cholera, ... 217
Drinks in cholera, ... 223
Dispensary establishment for cholera, . . . 382

Emphysema, case of, ... 56
Experiments on cholera patients, ... 67
Epitome of cholera, ... 193
Excision of elbow, ... 244

Ferguson's case of aneurism, ... 35
Fungus tumor on jaw, ... 78
Fever, observations on, ... 100
General observation, on its specific causes, . ib.
Causes of, ... 105

Gutteral polypus, ... 280

Hamburg cholera at, ... 5
Heming on uterine hemorrhage, ... 48

Inflammation, proximate cause, ... 156
Infantile remittents, ... 246
Introductory lecture on cholera, ... 395
Injection of the veins, ... 431
Continued, ... 434

Jameson on pneumonia and dropsy, . . . 44
On strangulated hernia, ... 54
Wound of the groin, ... 61
Nitrate of silver in tumor of tongue, . 77
Fungus tumor, ... 78
Fever, ... 100
Inflammation, ... 156
Epitome of cholera, ... 193
On history of, ... 194
Cholera, its character, &c. . . . 198
Non-migratory, . . . 199
Nature of the epidemic, . . 200
Cause of, ... 204
Prevention of, . . . 207
Symptoms, ... 212
On polypus, ... 280
Epidemic cholera, ... 283
An introductory on cholera, . . . 395
On wound of ulnar artery, . . . 40
On wound of iliac vein, . . . 61
Ligature on iliac artery, . . . ib.

UNIVERSITY OF MICHIGAN

Kerr on excision of elbow joint, ... 244

Lunar caustic for cure of tumor on the tongue, . 77
Lactation remarks, ... 87
Laws regulating conception, ... 233
Lacerated wound of arm, ... 259
Luxation of the humerus, ... 280
List of mortality at hospital No. 1, ... 389
No. 2, ... 391
To show the extent of disease within the city at No. 2, 393
To show the extent of disease within the city at No. 1, 394
Lewins on infantile remittents, ... 246

Morton on lactation, ... 87
Madras board of health on cholera, ... 166
Malignant form of cholera. 214
Mild form of cholera common in May, 1832, . 372
Mackenzie on cholera, ... 343

New mode of compression in aneurism, . . 40

Observation on cholera at Hamburg, ... 5
Operation for aneurism, ... 35
Ordinances in anticipation of cholera, . . . 376

Perry on Burns and scalds, ... 91
Proximate cause of inflammation, ... 156
Plea of insanity in case of homicide, ... 261
Pneumonia with dropsy, ... 44

Report of cholera hospital No. 3, ... 407
Robertson on conception, ... 233
Rheumatism, acute, ... 254
Report of cholera hospital No. 1, ... 343
Report of cholera hospital No. 2, ... 283

Subclavian artery, aneurism of, ... 35
Skin diseases, ... 124
Strangulated hernia peculiar, ... 54

Tumor of the tongue, ... 77
Treatment of cholerine, ... 218
In malignant, ... 223
Tumors of the head of infants, ... 257

Uterine hemorrhage peculiar, ... 48
Umbilial presentation, ... 260
Umbilical hemorrhage, ... 274

Vein iliac wounded, ... 61

Warner on cholera, ... 407
Wound of ulnar artery, ... 40
Wolfley on emphysema, ... 56
Wound of groin, ... 61
Warfield on luxation of humerus, ... 260
On umbilical presentation, ... ib.
On lacerated wound of arm, . . . ib.
Watson's cases of homicide, ... 261

UNIVERSITY OF MICHIGAN

UNIVERSITY OF MICHIGAN